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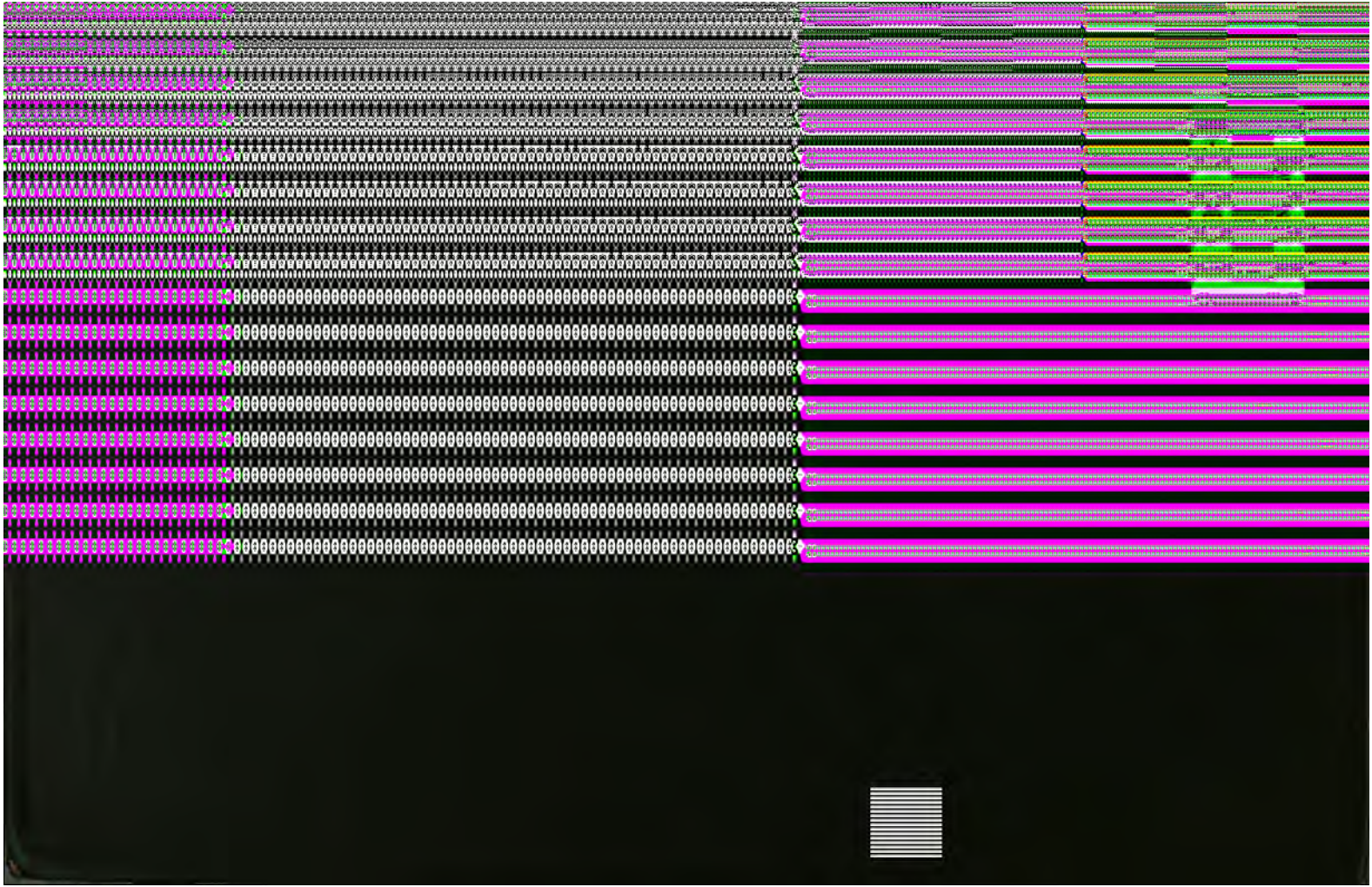

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WHAT CAN I KNOW?

AN INQUIRY INTO TRUTH,
ITS NATURE, THE MEANS OF ITS
ATTAINMENT, AND ITS RELATIONS TO
THE PRACTICAL LIFE

BY
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PREFACE

THE asking of questions, and the conscious, persistent, and deliberate search for their answers, is characteristically human. Even in the quest for the gratification of his appetites, the intellect, volitions, and tastes of man are involved in a quite different way from that which is the case with any of the lower animals. Only man makes a problem demanding thought and exciting anxiety out of the questions: "What shall I eat?" or, "What shall I drink?" or, "What shall I put on?" In answering these and all similar inquiries, he defers to customs that have established themselves, not merely in considerations of physical necessity, but also of propriety, aesthetical gratification, and moral obligation. And these considerations are themselves the fruits of reflection, if not on the part of the individual, at least on the part of the clan, tribe, or race, to which the individual belongs.

But what is for our present purpose more important to notice, is this: It is characteristic of human reason to ask and pursue the answer of yet more abstract and deeply hidden questions. Some sort of interest in, and of inquiry into, the

fundamental problems of science and philosophy, has excited the minds of men from the very earliest traceable beginnings of human history. Nor are the motives for this interest wholly confined to any imagined physical good or pleasurable, but as it were *ab-extra* experiences, which their conjectural answer might promise to afford. The intellectual satisfaction which comes from asking and answering questions of every sort — and not by any means least, questions of the most difficult sort — has operated to stimulate the human mind as much as the hope of gaining information available for the more successful conduct of the so-called practical life.

Among the questions, the value of right answers to which is found both in the interest of intellectual satisfaction and in the successful conduct of life, we may distinguish the following four as easily standing in the front rank. Tersely put in common language, they may well enough take the following form: What can I know? What ought I to do? What should I believe? What may I hope? As expressed in this form, they are designedly made closely fitting to the exigencies, the opportunities, and the interests of the individual man. As set in the moulds of the different main departments of philosophical discipline, the first and third of these questions might be called "epistemological"; the second "ethical," and the fourth, a question having to do chiefly with certain aesthetical and religious

experiences. It is as problems of the personal life that we are proposing briefly to raise and to discuss them.

It would be a mistake, however, to think that any of these four questions can ever be raised, much less even provisionally and partially answered, as other than as philosophical problems. But this is only to say that they are all problems of reflection, and reflective thinking is the method of all philosophy. Nay! reflective thinking is, essentially considered, the very substance of philosophy. We might go still further — and employing another more offensive word — say that they are all "metaphysical" problems. But we need not be troubled by this manner of designating them. For we may at once remind ourselves of the truth which was clearly enough enunciated as long ago as Aristotle, namely — that every man, inasmuch as he is a man, is also a philosopher. If, then, we say to ourselves "You must not philosophize," the answer of our common nature comes back: "And yet you must philosophize." Inasmuch as metaphysics is nothing but some thinker's theory of reality, whether framed in terms of instinctive belief, or of the most elaborate and systematic form of reasoned argument, every man is also bound to be either a naïve or a more or less trained metaphysician. Neither does the man who thinks of himself as a thorough-going agnostic, or as a complete empiricist of the most new-fashioned sort, escape the

charge of being intellectually more noble than he esteems himself to be. He, too, is a born philosopher.

Even a momentary attention to the language in which these four questions have been couched, suggests certain prominent features, which, while relating them and making them inter-dependent, serve to emphasize their differences. To raise the question, What can I know? indicates a problem that emphasizes ability. To ask, What ought I to do? introduces and lays stress upon the idea of obligation. But to inquire further, What shall I believe? suggests a mingling of prudence, dependent upon rational considerations, with a certain kind of obligation: while, What may I hope? seems to be mainly a question of privilege. Further reflection reveals the fact that they build upon one another in the order in which they have been named. The question, What can I know? is for every man fundamental and controlling in his attempt to find answers to the other three questions. We shall, therefore, consider this question first of all.

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To the Seekers after Truth:
"Shall we not look into the . . . things that seem,
And things that be, and analyze
Our double nature?"

WHAT CAN I KNOW?

CHAPTER I

THE MEANING OF THE QUESTION

THE question, What can I know? when seriously put to himself by the individual man, suggests a variety of answers from different points of view. In a general way, it is, of course, a question of personal ability. As asked by the student preparing for an examination, by the lawyer making ready his brief for the conduct of a particular case, by the doctor attempting the diagnosis of an obscure disease, by the business man considering some new financial enterprise, or even by the applicant for a position as cook or gardener, it is an inquiry into the equipment of skill and energy required for the accomplishing of certain practical ends. In all these cases, the question involves the assumption of a store of information, already obtained or easily obtainable, which can be put at the service of another question: What can I do? The solution of problems of accomplishment depends upon the solution of problems of knowledge. Thus the more precise form which the problem of knowledge takes in the daily life of

all of us may be stated in somewhat the following fashion: What can I know *about how* best to do what it is my particular, personal calling, duty, or interest to do?

Even when asked in this seemingly limited and rather manageable way, the question is more complicated than at first sight appears. The inquiry, What can *I* know? if I consider all that I have ever observed or otherwise learned as incorporated into myself, involves the very fundamental and complex inquiry: What sort of knowing personality am I? And to answer this inquiry at all fully would require an incredible amount of knowledge about human selfhood, in general, and about my self in particular. For I am a member of a race which is supposed to be endowed with, or in an interminably long series of developments has acquired, certain rather definitely limited faculties of knowledge. Moreover, I came into the world with an ancestral inheritance which, in its so-called cognitive aspect, may be deemed a capacity for knowledge. This inherited capacity reaches backward into the dim recesses of the remotest past of human history; for, although my parents may be supposed to have contributed most liberally to my inheritance, they by no means contributed all. Many a man is forced to the belief that the advice of the American wit, to have chosen another kind of woman for his grandmother, is no unmeaning witticism. Indeed, choosing one's grandmother, if it were

possible, would be for any man ambitious of distinction for inherited capacity of knowledge, an exceedingly serious piece of business.

But above all, when any thoughtful man raises the inquiry as to what he can do thoroughly well, because he knows all that is to be known *about how* to do that particular thing, he is apt to revert in memory to the use he has made in the past of opportunity for the development of his inherited capacity. Then memories of unemployed and neglected opportunities, like sad spectres of departed friends, intercourse with whom during life we too much neglected, come trooping into the mind. These memories emphasize the importance of having and improving opportunities.

All the while, from the hour of birth, and even before birth and the moment of conception, powerful influences over which neither his ancestors nor himself have had much control, have been working to determine the answer, for every individual, of the question, "What can I know?" I refer to that complicated network of contributing forces and elements which may be grouped together under the term "environment." We have something to say about selecting these: some little to say about constituting and shaping them. It is they, indeed, that constitute our opportunities. But, on the whole, they have much more to say about what we shall be and do, than we have to say as to what they shall

make us to be and what they shall fit us to do. Hence the foolishness and the irreligion of the Pharisee's prayer when he thanked God that he was "not as other men are." A very good prayer this, if offered in humility and gratitude rather than in self-conceit and pride.

After all else is said, however, it must not be forgotten that the problem of knowledge is for every individual a question of ability; and that all questions of ability, as applied to the human species, imply a certain so-called freedom of will. Whether this freedom of will is specious or not, and even what we are to understand by the term "freedom of the will," we need not inquire at the present time. Whether it is wholly *determined for the Self* by inheritance and environment, or is in part at least *acquired by the Self*, as arising out of the mysterious and inexplicable source of finite personal development, does not change the meaning of our problem. We all judge ourselves, and all judge all others *as though* the answer to the inquiry into a man's ability to know depended to some extent upon whether he himself really wished and determinedly willed to know.

It is true that our system of modern education is largely neglecting and corrupting this element of the determined will. It is cultivating a reluctant *receiving* of knowledge on the part of our children and youth, rather than a strenuous *getting* of knowledge, no matter what the

price to be paid by way of personal effort may be. But after all, a part of the teacher's voluntary exertions to make cognitive impressions on his pupils must take the direction of arousing the activities of interest and its accompaniment of attention. Some *will to know* necessarily reacts in the form of an increase to knowing ability. It is impossible to expand the mind by pouring material into it as into a vessel that is already overflowing its capacity. Even the feeblest effort to receive increases receiving capacity. As soon, however, as youth or man seriously undertakes the learning of anything, be it football, or carpentry, or banking, or some profession, he finds that knowledge cannot well be put into one mind by another; that, on the contrary, one must put one's self into the knowledge, in order to make it one's own. And putting one's self into the task of learning is an act of will. The answer to the problem, What I can know? therefore always depends in a measure upon the decision of the question: "What do I will to know?"

We must distinguish, then, four main classes of considerations which enter in a large and fundamental way into the solution for every individual of the important problem of knowledge. These considerations affect him as (1) a member of the human species; (2) as endowed with a certain inherited capacity; (3) as fostered or confined and thwarted by a certain environment; and (4) as an individual willing to know.

Let us now give a brief consideration to each one of these four conditions, which inevitably determine the quality and amount of his knowledge for every individual man. And first of all, the question, What can I know? depends upon the answer to the question, What can men in general know? For the biological law appears here in full force; the individual member of the species has, at the base of his individuality, all of the relatively few but fundamental characteristics of the species to which he belongs. Any son *may* surpass his own father, and indeed all his ancestors to the remotest past, in the accuracy and range of his knowledge; but no son of humanity can reasonably hope to surpass his race in respect of the things which he knows, or the certainty with which he knows what he knows. To say this, however, is not to deny the possibility of an unending chain of new discoveries for the race, or of a ceaseless future development of its knowledge; it is not even to say to any individual, "You can never hope to make any new discoveries or to contribute in some substantial way to the increase of human knowledge." What, then, is the theoretical significance of this agnostic declaration; and what is the practical good of bearing the truth somewhat constantly in mind?

That human knowledge is limited as to its character and as to its range by the nature of human capacity is a declaration as obvious as it

is theoretically vague and practically useless. There have been men of learning and men of science, as well as students and teachers of metaphysics, who have held that all human knowledge is vain as a guaranty of truth about the nature of physical realities; and yet more vain as to establishing the rational conviction that there exist in reality any spiritual beings. This wide-reaching negative conclusion they are accustomed to establish on the ground of the limited nature of human knowing capacity. But their argument often seems to amount to saying: "There is no human *knowledge* (worth calling such) because all our knowledge is *human*." This may provoke the not altogether unreasonable inquiry: "What other kind of knowledge than human knowledge would you consider it possible for human beings to have?" Of course, however, such play upon words constitutes no satisfactory argument either for or against a pretty thorough-going agnosticism. It should, however, excite interest in the personal problem as regarded from this point of view.

And now when we ask those who have made this problem of the nature and fixed limits of man's knowing capacity, the subject of long study and profound reflection, although finally we obtain much additional light, our first impressions are apt to be those of increased doubt and confusion of thought. We cannot deny that all man's knowledge is limited, and that it is all

relative to his faculties and to an implied correspondence, which must largely, if not wholly, be taken for granted, of the nature of the human mind to the nature of the things which the human mind knows, or at least thinks that it knows. But as to how far this limitation and this relativity vitiate all human knowledge and make it only a specious and false rather than a true picture of reality, we find by no means a perfect agreement. We are then, it is likely, tempted to dismiss the whole subject as unworthy of serious consideration, especially for the man who is most devoted to the concrete practical interests of the daily life. In this so highly "practical" age, all discussion of so-called "epistemological" problems is quite too apt to be made a matter of public scorn.

But if we give further pause to this impulse, we may then conclude that to follow it is neither honorable to our native regard for the rights of human reason, nor quite prudent in the interests of the best conduct of life. For many men have bruised themselves badly, or even quite dashed out their brains and been taken to the madhouse, or buried in untimely graves, because they have persisted in throwing themselves against the walls that limit all the mental activities of humanity. But, on the contrary, others falling into a condition of distrust, or even of despair, with regard to the progressive conquest of the world of reality by the human mind, have lost

their ambition to know and their faith and hope, with regard to the things invisible, of art, morality, and religion. All of which may serve to emphasize the hygienic maxim: Keep the constitution of your mind healthy with regard to this subject. In both extreme directions there are lurking peculiar dangers that not only warp one's speculative opinions, but also, and no less surely, ill condition the conduct of the practical life.

Away back in Plato's time we find a *dictum* ascribed to the Sophist Protagoras, which is reported to have run as follows: "Man is the measure of all things; of that which is, how it is; of that which is not, how it is not." In various forms some such *dictum* has been made the basis of a theory of knowledge which, from a premise of conceded relativity, goes on to the conclusion of the complete untrustworthiness of all human faculty. But when Socrates, discussing the subject with the youthful Theaetetus addresses to him the following banter, he hints at the fallacy which lurks in every such syllogism. "I say nothing against his doctrine," says Socrates, "that what appears to each one to be, really is to each one, but I wonder that he did not begin his great work on Truth with a declaration that a pig or a dog-faced baboon or some other strange monster which has sensation, is the measure of all things." Now, since no modern agnostic would assert that these other animals' measure of reality by their sensations

is to be put on a par for trustworthiness with the measuring reason of man, we must know something thorough about the measuring power of the latter, before we can be credibly raised to the heights of intellectual pride or plunged in the depths of agnostic despair.

The measure of reason itself, the great philosopher Immanuel Kant aimed to discover by a very special, patient and elaborate method of research. His conclusion was that knowledge, whatever the object, is only of phenomena, and that by the intellectual or scientific method of pursuit we can only *know* of both physical and spiritual realties *that* they are, but never in this way, *what* they are. But here again the door was opened so that the inquiring mind might enter into all the most assured and rational confidences as to God, the soul, and immortality, through the faiths that are constitutive and indestructible for human moral reason. And to the man chiefly interested in things of the highest value it is surely well worth while to know that, if he may not have knowledge, he may at least have a reasonable faith respecting them.

Rather more than a half-century ago there arose another brave attempt to limit human knowledge in an absolute way, which drew to itself the name of "Agnosticism" *par excellence*, as it were, and which prevailed widely for an entire generation. I refer, of course, to the theory of Mr. Herbert Spencer. As stated in

its simplest form at the close of the second chapter in his book on First Principles, this theory bases itself on the assumption "that the power which the universe manifests to us is utterly inscrutable." From this assumption follows a negative view of the relativity of all knowledge, including "the ultimate scientific ideas." In such a way we are promised that we shall secure the positive benefits of a complete and final reconciliation of science and religion. But lest we find the promise false and deadly to the higher life, we remind ourselves that Mr. Spencer is himself sure above all other things of the existence of this Power, of its unity, and of the important truth that *It* is back of the Universe and is manifested in the Universe. It may well be, therefore, a matter of the utmost speculative interest and of the gravest practical import, it may even be a matter of prudence and of duty to inquire: "As being what kind of a Power does Mr. Spencer's Unknowable manifest itself in the Universe?"

Enough has, however, been said at this stage in our inquiry to show that we cannot lightly dismiss the call to reflection upon the unalterable conditions, if such there be, which determine the answer to the personal question, "What can *I* know?" as these conditions grow out of the uncontested fact: I am a human being, the child of a race characterized by certain limited powers of knowledge.

Not in the same way, but still of no inconsiderable value as contributing to sanity in all attempts to answer the personal question, is an intimate acquaintance with the persistently unsuccessful attempts at solving certain problems of knowledge that have been made by other men in the past. Among such attempts we might instance the discovery of the exact proportional relation of the diameter of a circle to its circumference, as stated in terms of a series of decimals: or, again, the method of constructing a piece of mechanism that shall eliminate absolutely all loss of energy from friction, dissipation of heat, etc., and so shall become capable of what is called "perpetual motion."

All the lunatic asylums in the world would not really contain a moiety of the men and women who have gone mad in the attempt to know the answer to questions that were for them at least, from the very start, unanswerable. And many more there are in asylums and in prisons and in hopeless and unhappy homes, who would not be thus placed, if they had not too quickly and incontinently concluded that they could not know of the existence of a good God, of a soul of their own and in their own keeping, and of the reasonableness of the grounds for a hope of immortality.

There is no more certain fact, none more important for every human life, than this; that every individual's physical and mental faculties are to

a large extent determined for him by ancestral inheritance. But the combined efforts of the biological and psychological sciences have thus far been able to accomplish very little toward establishing in indisputable form the particular laws which secure and control this general fact. In the case of persons of unusual talents and of the few men and women of genius, some anticipatory traces of promise can generally be discovered, wherever a sufficiently full history of the previous generations can be obtained. But even in these cases the explanation on grounds of inheritance is often quite unsatisfactory or entirely conjectural; and in all cases it is only very partially successful as accounting for all of any individual's peculiarities. As to the vast multitude of mankind, — what, if we treat human beings with a measure of the contempt we bestow upon some of the lower animals we may call the "common herd," — science never has had, and never will have, sufficient data for a universally applicable induction.

The difficulties which beset the attempt to solve our personal equation, between the forthputting of energy and the practical value of the result, are similar when the problem is approached from this point of view, to those which are encountered when we come upon it by way of speculation as to the essentially agnostic condition of the entire human race. Indeed, in some respects, the problem of inheritance is the more

difficult problem. For, as I shall undertake to show later on, it is not at all impossible by reflection to get such an estimate of the inescapable limitations of all human knowledge as to secure us against the majority of our practical blunders in this direction. But he would be a very foolish pretender, a very charlatan in biology, who would undertake to expound the hygiene and therapeutics of the average man's mental equipment and achievements, in the light of a full knowledge of his inheritance. Yet biological, and more especially psychological, science, if not infallible guides, are certainly prepared to be of no small assistance to the individual man in preparing an answer to the question: What can I know? And within limits, every intelligent and observing person can learn to be his own biologist, his own psychologist. Fortunately, nature often, if not generally (and certainly not universally) plants in the individual longings, intimations, ambitions, which correspond in a valuable way to his inherited capacities. It would undoubtedly be better to say that the longings, intimations, ambitions, and the answering native capacities, are different parts or aspects of the same inheritance. Hence the trials which fathers have when they insist on driving into a trade or into business the son who has been born (as something more than merely his *father's* son) with an ambition and a capacity for being an artist or a musician.

But longings and ambitions to be distinguished

in some kind of learning or technical skill are no sure guide to judgment as to one's inherited capacity. Perhaps pitiful mistakes are as plentiful as splendid successes on the part of those who trust themselves to this sort of guidance. Men and women of rare talents, or even of genius, have children who inherit neither their ability to know nor their desire to know. From the very nature of the case, no individual in the earlier stages of his development can know enough about his own inheritance to make much use of this knowledge in the solution of the personal problem. Boys and girls know less about the capacities and natural dispositions of their parents than their parents, as a rule, know about them. And to make the little information about one's ancestral inheritance which one can gather early enough to be of any good, the major premise of the required syllogism would be as unpractical as illogical. In fact, few attempt such a line of argument.

Yet after all has been said by way of discouragement, enough remains to make it the part of wisdom for every man to take an occasional inventory of his "born" capacity for knowledge, and to derive encouragement from a painstaking estimate of its net assets. But the items on the basis of which this inventory must be made are for the most part items in the experience of ourselves with ourselves. We look at the daguerreotype or miniature painting which preserves the fea-

tures of the decrepit man or aged dame, who died more than fifty years ago; we start with surprise at the discovery, how much, as we grow old, we are coming to develop the same characteristic features. Then we remember traits of mentality or of disposition belonging to these same old people; and again the feeling of surprise grows more slowly within us as we recognize how surely we seem to be developing the same traits.

It is possible to an increasing extent for experimental psychology to assist self-observation in the discovery and partial remedy of inherited defects and in the improvement of inherited aptitudes. For example, if one has been born tone-deaf, one may be spared the disappointment of trying to learn music; or if born color-blind, the disappointment of trying to become a painter. So, too, one with a "good ear" but lacking in delicacy of tactual sensations can be assured that he can never know how to play the violin. Any well-appointed psychological laboratory can save scores of young women who aspire to sing in grand opera from the vain expenditure of time and money and the bitter sense of failure at the end.

By less obvious and direct methods, and in a somewhat less conclusive fashion, one can find out by a kind of preliminary skirmishing, whether one is to be helped or hindered by one's inheritance in the long struggle to become master of some form of science, or manufacture; of business, or handi-

craft, or profession, or political or diplomatic pursuit.

But all the while from birth onward, and even before birth the answer to the problem, What can I know? is for every individual man largely a matter of environment. Much deep digging in the garden of knowledge requires, not only strong hands and back and a sturdy will, but more or less specialized tools and appliances. It is true that judgment enables one to make a judicious selection among these tools, and that a determined will can supply some of the deficiencies which consist in being without them. But the more the positive sciences advance, and the contrivances for doing things promptly and effectively are increased, the more is the individual dependent for his full relative available share of the world's knowledge, on his environment.

Yet even such considerations as those just hinted at, do not set forth the deeper significance of influence from our surroundings. It is environment acting upon inheritance which shapes the personal characteristics themselves; and this in no dubious or trifling fashion. The training, or lack of training, in the family life; the instruction and discipline, or lack of both, in the school life; the thousand influences by way of imitation, example and teaching which have surrounded us in the form of companionships, friendships, and all kinds of social relations; all these have conspired to make us what we are, whether our

reactions have been chiefly those of acceptance or of resistance. For what a man hates and fights has quite as much to say as to what a man shall be, as what a man loves and adopts. That natural and honorable feeling of opposition to injustice which, under favoring circumstances, might have developed into the appreciations and sympathies most helpful to the reformer, under unfavorable circumstances becomes the bitter and murderous hate of the nihilist. Good dispositions are warped or cherished, bad dispositions are corrected or fostered, according to the soil in which the seed is planted.

Most subtle and powerful for good or evil, among all forms of every individual's environment, is *opinion*, whether as current on the tongues of the community, or lodged in the silent recesses of the common mind, or embodied in the prevalent customs. "Opinion," said the ancient Greek philosopher Heraclitus, "is a falling sickness." And quoth Sir Walter Raleigh: "It is opinion, not truth, that travelleth the world without passport." "Almost every opinion we have," declares the author of, *De la Sagesse*, "we have but by authority; we believe, act, judge, live and die, on trust, as common custom teaches us: and rightly, for we are too weak to decide and choose for ourselves. But the wise do not act thus." So sharp a line drawn between the wise and the weak is, however, by no means wholly justified by the facts of the case. For it

is neither a sign of weakness to be influenced by custom and opinion, nor a sign of wisdom to "decide and choose for ourselves." *All depends* — upon scores of subordinate and approximate considerations, which are different with every individual man, and which change with every individual from hour to hour. The truly wise man, after long experience in his search for an answer to the question, What can I know? learns to say sometimes, "Get thee behind me Satan," and sometimes, "Welcome as my guide," to the injunctions and solicitations of custom and current opinion.

Even in matters of scientific knowledge, the prevalent opinions of those who, as is so expressively said, "ought to know," are quite indispensable for determining the limitations of our own knowledge, and the directions in which we ought to search, if we wish to know more. In such fields the exploits of a self-conceited ignorance are often most amazing. Witness the numerous letters which we ourselves have received from earnest minds offering to submit the products of years of research culminating in the refutal of the law of gravitation or of the established views as to the constitution of the solar system. In such matters as personal hygiene, medical treatment, or business and social morality, every one knows how large is the majority who either take the opinions of their professed leaders and teachers with superstitious reverence or with concealed

or open contempt. How picturesquely are these extremes of mental attitude toward scientific opinion brought out in our courts of justice! But the mind which wishes to make opinion a point of starting and a guide to knowledge will bear in mind the truth of what the late Professor Gibbs once said to the author: "If you want a really *infallible* expert opinion, you must never consult more than one expert."

Into this deep and powerful stream of influences, — environing, hereditary, and essentially human, the individual man is thrown a naked, wailing infant, as unclothed yet sensitive to all kinds of stimuli, in mind and morals, as in body. For a little time his head is held above the current by some more or less friendly hand, while he floats, unheeding and unconscious of the direction in which he is being carried along. At length, this vast collection of amoeboid elements begins to manifest what the English physiologist says it is characteristic of every individual amoeba to manifest, "a will of its own." Blind will, it is at first, the bare "will to live," the impulse to take a part in the struggle for existence. The kicks and the strokes of the small swimmer are for a long time little guided by intelligence, less controlled by wisdom, and still less heeded by the currents of his life. From the first, however, to the educated and observing eye, traces of the promise of a human sort begin to appear. The young animal is, indeed, developing a soul of his

own; and this soul is acquiring something more than the rudiments of an amoeboid will. The power of selective attention emerges and increases; more and more elaborate discriminations begin to be made; traces of moral consciousness and of other judgments of value appear; in a word, the making of a man is in full process. Individuality, that ultimate mystery of existence, is being shaped out of the elements furnished by inheritance and influenced by environment.

In view of these phenomena there arises the common opinion, emphasized by the customs, laws and language of all races in all the ages, that the individual himself takes some important part in the making of himself a man.

Before leaving this preliminary attempt to fix the meaning of our problem, and to excite an interest in its more careful discussion by every man who would develop and use wisely his intellectual powers, there is one other consideration which may properly be brought to the front. The pleasures of the search for truth — just the bare, even if unsuccessful search — have been sung in all ages by poets and by philosophers. Something may be said, then, in favor of the strenuous effort for knowledge, even from the eudaemonistic point of view. It would indeed be useless to try to attract the multitude of children to school, or of adults to some form of inquiry or research, simply by depicting the large measure of joy they were going to have in trying to know, whether

they could really hope to succeed in knowing, or not. Both children and adults very promptly ask themselves, and their teachers, and the members of the School Board, "What is the *use* of studying this or of learning that?" In fact, the utilitarian question seems to be increasingly incisive and more prominent in all our modern system of education. On the whole, it is probably well for the country and for its schools, that this is so. If only we could raise the moral and æsthetical value of the question, without changing its vulgar vigorousness, and render it: "What is the *good* of studying this or of learning that?"

There have been minds, however, who have taken such a keen and exalted joy in all forms of mental exercise — and especially, in that particular form which happened to be for them most exacting and therefore most exhilarating — that they have not hesitated to set the pleasure and benefit of striving for truth above the pleasure and benefit of its possession. That learned Doctor, Thomas Aquinas, declared: "The intellect commences in operation and in operation it ends." But the kind of "operation" which pleased this Doctor was theological speculation; and as everybody knows, theological speculation is particularly despised and almost quite tabū for the professed scientist and for the common man in the present day. Père Malebranche also protested that, "If I held truth captive in my hand, I should open my hand and let it fly, in order that

I might again pursue and capture it." And Jean Paul Richter affirms: "It is not the goal, but the course, which makes us happy." We do not expect, and we do not desire, to convince the man of sound good sense who asks with us some sort of light upon the question, What can I know? that the joy of its pursuit will amply repay him, whether the pursuit contributes, or not, to the better understanding and at least partial answer to the question itself. In our judgment, Truth is so rare a bird and so hard to capture, that he who once lays his hand thereon would do well to grasp firmly and hold on tight. But we do confidently assure every honest seeker after truth, of whatever sort, and whether the so-called speculative or the so-called practical, that the search, when it is properly regulated and earnestly made, is not only a most honorable but also a most pleasurable exercise of the human mind. And this is especially so, when we seek the truths that have the highest worth.

CHAPTER II

WHAT IS IT TO KNOW?

THE answer to the question, What can I know? if it is to be intellectually satisfying and practically safe, must depend in large measure upon the conclusions at which we arrive, after raising and reflecting upon another question. This latter question concerns the nature of knowledge. If now we were to ask the average man, What is it to know? we should probably in the majority of instances be met by either an amused smile or a perplexed stare. For the reflective thinker, bent on getting an inductive answer to this so-called "epistemological" inquiry, to imitate Socrates and make a business of eliciting from anybody and everybody his views on the subject, might end in the inquirer being consigned to an asylum as a person of disordered mind. So sure in general the people are that they know what knowledge is.

It requires but little serious thought, however, to disabuse any honest mind of this assurance. The popular language suggests unmistakably the serious difficulties which beset the attempt at an off-hand solution of our problem. They also

just as unmistakably indicate the confusion of thought which prevails upon its nature. Few sayings are more common than such as these: "I used to think that I knew but now I know that I did not"; or, among the vulgar, "I *guess* I know"; or again; "I ought to know better than you do." So, too, in legal tournaments, different but equally honest witnesses affirm with equal sincerity irreconcilable and contradictory knowledges about the same facts; and opposing lawyers bring forward their hired experts to give assured but hopelessly conflicting opinions of the truths involved in hypothetical cases. There is not a wise old man anywhere to be found who is not ready to confess: "I do not now know one-half as much as I thought I knew when I was young." It was a psychologically true witticism of the American humorist who declared, "It is better not to know so much than to know so much that isn't so."

In his great work, Critique of Pure Reason, Kant has a chapter which he heads "Of Trowing, Knowing, and Believing." He then goes on to show that the holding anything to be true, or the conviction that our judgment concerning it is valid, may have the three following *degrees* corresponding to these words. *Trowing*, is to hold a judgment true with the consciousness that our judgment rests on grounds which are insufficient to produce a firm conviction. If, however, we have the conviction, but can not

place it on sufficient grounds to produce conviction in others ("insufficient objectively" are the words which Kant employs), this is *Believing*. But *Knowing* implies both kinds of sufficiency, — *conviction* for myself, *certainty* for everybody.

It may easily occasion a slight shock of surprise in most minds to be told that there are *degrees* to knowledge; for is it not common enough to say: "If one really 'knows' anything, why then one *knows* it," and this is a valid excuse for ending discussion and doubt, at least for the time being. In other words the individual has solved for himself the question, What can I know? in this particular case. Even Kant in this passage is not so much affirming the doctrine that there are degrees of knowledge as the opinion about a so-called "Canon" (or accepted rule) of the faculties of knowledge. He is emphasizing the fact of the most ordinary experience, that men make distinctions in the degrees of conviction and certainty belonging to opinion and belief before either of these reaches the stage which we are pleased to call *knowledge*. But in order to understand the nature and uses of knowledge, we shall be obliged to go a long way beyond the admission of the great German philosopher. For there is in fact an almost indefinite number of scarcely distinguishable degrees of both conviction (Kant's "subjective sufficiency") and certainty ("objective sufficiency") in those mental attitudes which we group together under the one word, knowledge.

And in this respect — as, indeed, generally — psychological science amply confirms the suggestions of the popular speech.

Let us now take up for a brief and familiar analysis some of the principal forms in which men quite commonly affirm that they know, and what they know, or believe they know, — thus giving a momentary practical solution to our main problem. For surely one *can know* what one actually *does know*. As judged by the significant forms which men take for either affirmation or denial, there may be said to be about four different specific kinds of knowledge; and on these differences of kind, to some extent at least, the differences in the degrees of knowledge are dependent. First of all, we constantly hear men affirming or denying for themselves or others a kind of knowledge that is based on the most immediate and fundamental evidence of their senses. Under the head of this kind of knowledge such inquiries as the following often arise: Do you know that (particular) man? or Do you you see that (particular) tree, or *the* horse which is at this moment ahead of his competitors on the race-course? In all such cases as these it is theoretically possible to point toward the object with the finger. The thing we are inquiring about is here or there, either as an actual presence in space or as able to be set up in space by an act of imagination.

A somewhat similar, but by no means exactly

the same kind of knowledge, is that of events, as obtained either by the senses or by the evidence of other observers. Such knowledge introduces us to another even more important distinction as effecting the various degrees of knowledge. This is the distinction between knowledge obtained by the use of our own senses and knowledge obtained by testimony which depends for its trustworthiness upon the accuracy and fidelity of the observations of others. It is popularly supposed that a higher degree of knowledge is necessarily gained by the man who has sensed the very thing "for himself," as the saying is. But scarcely anything could be further from the truth than this supposition. The testimony of the microscopist who has seen the baleful bacilli in the sputa of his patient suspected of tuberculosis is a thousandfold more productive both of conviction and of certainty than the failure to see of a dozen different pairs of uninstructed eyes. Then, on the other hand, we have to reckon with such testimony as that of the man who

> "thrusts his fists against the posts,
> And still insists he sees the ghosts."

And did not a celebrated Dutch biblical scholar announce some years ago, that he would not believe a miracle even if he saw one with his own eyes?

There is a third kind of knowledge, which is particularly subject to degrees of extent, accuracy, and subjective certainty, and this is knowl-

edge pertaining to whole classes of objects. Thus we hear one camper-out saying to his fellows: "I know every sort of tree that grows in this part of the State," — the Adirondacks or the Lakes of Maine, — and another responding: "I should not know an oak if I saw one, or the difference between a spruce and a larch." It is this kind of knowledge which the individual learns for himself by repeated observations. It is the knowledge that is taught in schools or in books of science. It is the kind of knowledge that is accumulated by the different generations of the human race, and in the possession of which, rather than in differences as respects intellectual faculties or habits of correct observation, as such, the difference between civilized and savage man chiefly consists.

But, finally, there is a kind of knowledge which seems to stand yet more remote from the daily observations of men as to things or events, or even as to entire classes of things. This knowledge may be said in some sort to depend on the accumulations of knowledge of events and of their relations to each other, under what are called general principles or laws. But here we are well over into the domain of the invisible, the really mental, or the truly spiritual. For a principle or a law is far less able to be known as testified to by anybody's senses than is a ghost or a miracle. But it is in the knowledge of laws — and may we not also say, of the principles of

the invisible world of science, art, morality and religion? — that the growth of reason itself, and the increasing ability to order aright the conduct of life, mainly consists, both for the individual and for the race.

It is plain, almost at first blush, that all these kinds of knowledge, — knowledge that and knowledge what, knowledge of and knowledge about — admit of almost infinite degrees of conviction on the knower's part, and of ability to convince others with a "sufficient" degree of certainty. This aspect of the answer to the question, What can I know? does not, however, so much concern us at the present time. What we now wish to do is, the rather, to distinguish those elements which are common to these and, if there be more, *all* kinds of knowledge, as a help in solving the problem, What is it to know? To reject all acts and kinds of mental attitudes and mental performances which do not attain what Kant calls a "sufficiency" of conviction and certainty, on the ground that they are not "real knowledge," would sadly limit our intellectual horizon, and make unsafe and erratic the conduct of the practical life. For in philosophy, as in other forms of business, it is poor policy to throw away what you have, or need not be hopeless about getting, because you despair, at the outset of endeavor, of getting all you would like to have.

What we notice first as to the words common to the affirmation of the knowledge of all kinds

of objects, — be they individual things and persons, or single events and so-called facts (which always, of necessity have the nature of events), or entire classes of things, or the most general laws and abstract principles — what we notice as to the words common to them all, I say, is that they announce, or imply, some particular knower, some one or some number of persons, that has the knowledge. In brief, knowledge, however the objects known may differ, always has essentially the same kind of a subject. It is always, "I know," or "he knows," or "they know." And he who makes the affirmation assumes, as a matter of course, that he to whom the statement is made, knows by his own experience what it is to know. This is, to some extent at least, because the knower is himself aware of what has gone on in his own mind when he has arrived at the judgments which carry with them the kind of conviction of their own verity, and the kind of certainty about the existence and nature of their object, which *are* characteristic of all knowledge. And yet the analysis of the simplest act of knowledge taxes the resources (yes! over-taxes and far surpasses) of the most learned and elaborate system of psychology. Upon some of the more important points in this analysis, there is far from being anything like a complete agreement.

Because we are trying to help any intelligent inquirer to answer in a useful manner the question,

What is it to know? as well as because we should surely be detected of professional arrogance, if we attempted to give a complete and universally accepted answer, we shall make no full parade of our theory of the psychology of cognition. To call back, or to call up for the first time some of the things which any reader may test by his own experiences, will quite suffice the present necessities. Even this must be done in all honesty of the confession that there are not a few theories current with regard to the nature of knowledge which are not easily verifiable by any one's experience.

From the point of view, then, of the subject of the act of knowledge, of the knower himself, we may safely say that, whenever he knows, he is conscious, if not *of* knowing, at least, *in* knowing. There have been those, and among the best of psychologists, who have maintained that there can be no single act of knowledge, however simple, without the knower knowing himself as the subject of the act. But this seems rather to complicate than to assist in explaining matters; and besides it does not correspond altogether well with our experiences by way of knowing. Most of these experiences are best covered, so far as our conscious activity is concerned, by just saying, "*I know*" this or that; and to say thus much is to say enough about it. I am not in the least aware of any reference to my Self, as knower. But no psychologist would

be bold enough to try to convince the "plain man" that when he knows anything he, the knower, can be *totally unconscious*. Many mental performances, and some of them of a very startling character, are in these days ascribed to "unconscious mind." This mind, which in some mysterious manner is related to our mind, seems to know a good many things about our selves and about other matters, of which we have little or no conscious knowledge. Now whatever feeling of attraction or of aversion we may have toward such a phrase as "unconscious mind," (and the writer must confess to a rather strong feeling of aversion), to speak of an absolutely unconscious act of knowledge, is to utter a real, as well as a verbal, monstrosity.

So, too, we may listen long and eagerly to the story and the explanation of the phenomena of double and triple personality. We may remind ourselves that not a few savage peoples have "gone" the most extreme of the modern psychologists more than "one better," and have ascribed to every human being five or even seven souls. We may ourselves be of the opinion that these, as well as all similar abnormal phenomena, can best be explained by extensions and combinations of accepted principles of the science of mental life; or we may dissent from this opinion. We may agree, or not, with the late Professor James when he says: "The definition of psychology may best be given in the words of Pro-

fessor Ladd, as *the description and explanation of states of consciousness as such.*" Perhaps, after all, one soul is enough for any man, if only it is enough of a soul. However, this may be, as a matter of theory, not one of these persons or souls, subconscious or unconscious so far as we are concerned, can possibly be conceived of as performing an act of knowledge, while itself in a state of unconsciousness. We may be sure of one point, then, in our answer to the question, What is it to know? Namely, that it is to be consciously active. The knower is always in some sort a doer.

That to know is always to be active, that all knowing is doing — in the wider but quite legitimate significance of the latter term — deserves a word further in its explanation. When we summon ourselves or others to any particular act of knowledge through the senses, we are apt to utter some exhortation like this: "Look there," or "Listen to that, will you!" or "Taste this," or "Smell of that," etc. In matters of knowledge that concern complex events or facts, or classes of things, or laws and general principles, we demand consideration of evidence, the weighing of argument, thoughtful examination, or other forms of prolonged and concentrated attention. But attention — more or less intense and extensive, and more or less under the control of will — is the accompaniment of all forms and degrees of consciousness, pre-eminently so, when

it is a case of the serious attempt at an act of knowledge.

Especially is this active consciousness which is involved in all knowledge emphasized by the work of learning to know. To learn well one must be diligent, must observe and study, must do something more than passively submit to impressions. Even in the receiving or rejecting of impressions, the mind is active; activity and passivity, in ever shifting proportions, characterize every phase and every moment of the mental life of man. But the side of activity must come ceaselessly to the front, at least in the discriminating, selecting, and interpreting of impressions, if the convictions and certainty which belong to the completed act of knowledge are to be attained.

As to the more particular form of conscious mental activity involved in every act of knowledge, the so-called faculties summoned into action by the challenge which is thrown out from every object of knowledge in our experience from day to day, we will briefly mention two of the specifically intellectual order. These are *recognition* as dependent on memory and association, and *thinking* in the more restricted meaning of the term. The former is ordinarily so spontaneous and instantaneous that it seems to imply little or no activity on the knower's part; while the latter is often so exacting of his efforts as to be considered the very hardest thing a man can do.

In order, however, to produce the kind of recognition which a satisfactory act of knowledge requires, we are not infrequently obliged to *try* to remember, to "think up" the object of knowledge; and, on the other hand, in the case of men trained to think in any particular line, the thoughts often flow in unbidden so fast upon the mind that they need to be chastened and restrained rather than stimulated.

True recognition, or that *re*-knowing which is indispensable to all elaborate knowledge and to all growth of knowledge, is no merely animal performance. In the way in which it enters into, not only all science and all speculative thinking, but also not less into the conduct of the life of the man of common-sense, it is a thoroughly human faculty. We describe the stupid man or the idiot as one who does not "*know* a thing even when he sees it"; and with respect to truths that belong to the realm of highest values we are told, by the great Teacher, of those "who have eyes but see not," and who "have ears but they hear not." All this is to say that in the commonest everyday knowledge of things by the use of the senses, the completion of the process (and it always is a *process*, however promptly and completely consummated) of recognition is essential. "Who *is* that man?" "What *is* that thing?" "I do not recognize him, or it," — this is quite the equivalent of "I do not know." But as we come out of the fixed stare, with the accompaniment

of an effort at reminiscence, we reply: "Ah! now I recognize him"; or "I see it is not what at first I thought it was."

To account more fully for this process which we have called recognition, as an essential of every act of knowledge, psychologists have been wont to divide the whole among three, or more, different but contributory faculties. These have been called "retention," "reminiscence" or "recollection," and "reproduction"; and all of them are under the control of the so-called "association of ideas." Strictly speaking, every one of these terms is almost purely figurative, and we know little or nothing about the psycho-physical or the mental facts which they are designed to express, but quite too often are so employed as, the rather, to conceal.

According to the son of the great Scaliger: "My father declared, that of the causes of three things in particular, he was wholly ignorant, — of the interval of fevers, of the ebb and flow of the sea, and of reminiscence." Modern science has undoubtedly done more to reveal the *causes* of the first two, than of the last one, of these classes of obscure phenomena. We continue to speak of a *retentive* memory and, perhaps, we have no better word to suggest the familiar facts of daily experience. Some men remember much better than other men; all men remember some things better than other things; although there are a few minds which seem to have a sort of uni-

versal memory. Carefully examined, however, such universality usually turns out to be rather confined to certain subjects or classes of facts, and retentive, even for these, only in a degree much superior to the average mind. But what is of the greatest practical importance to know is this: every man has peculiarities of memory, inherited or acquired; and every man's memory, and so his power of recognition as involved in all knowledge, is dependent on the fulfilment of certain conditions over which he has some, but only a partial control. It becomes every man, therefore, in answering for himself the question, What can I know? to keep before him the important part which reknowing plays in the answer to the other question: "What is it to know?"

Suppose that we have undertaken the slow and perhaps painful task of completing the thorough knowledge of some thing, some fact, some law of nature or of the statute-book, some ideal or principle of morals and religion. We wish to retain for future use this acquisition of new and important knowledge. If every item of knowledge slips from us as soon as it is completed, how shall there be any growth of knowledge? We will, therefore, stow it away in our minds. *Stow it away in our minds!* But how shall we get at this storehouse of the mind; and having reached it, with what key shall we lock behind us, so to leave our knowledge in safekeeping, its mysterious door? Again, when we need this once ac-

quired knowledge to serve some special use, or to be a point of starting, a guide, and a support for more knowledge, how shall we get it out of its storehouse, and make it anew an act of the conscious mind? We must recollect it; we must perform the act of reminiscence. But reminiscence and retention are not the same, though both are necessary to recognition, and so to knowledge. The man who had one of the most remarkable memories — in the larger sense of the word as implying an immense store of available knowledge — the elder Scaliger, made this distinction as applicable at least in his own case. "I call *memory* the *conservation* of this or that item of knowledge. I call *reminiscence*, the repetition of the mental procedure, which had lapsed from memory." Of himself, although he was able to commit Homer to memory in twenty-one days, and all the Greek poets in three months, he declared: "I have not a good memory, but a good reminiscence; proper names do not easily recur to me, but when I think on them I find them out."

It is sound psychology, as well as a matter of popular understanding, that imagination has much to do, both for good and for evil, with the ease and the accuracy of our recognition, and so with the range and the accuracy of our knowledge. The man who can best imagine how things looked, or sounded, or felt, when he was learning to know them, can best recognize the same things when he meets them anew, as the objects already

familiar to his faculty for knowing. The imagination of the scientific man must — to employ an expressive figure of speech — carry about a so-called "schema," or half-abstract conception, of the many individual things with the knowledge of which his specialty is concerned, and the great discoverers in science and speculative thinking, as well as the great inventors and reformers, must have minds of far more than ordinary powers of imagination. It is said of the late Lord Kelvin that he never believed in any theory of the universe until he was able to construct an imaginary machine after the analogy of the theory.

Once more, it is matter both of expert and of popular understanding, that the images of past acts of knowledge, as they make recognition possible and so enter into and condition every new act of knowledge, sustain complicated and subtle relations to each other. They suggest one another, control by their groupings the direction of our sensations, and shut off our thoughts in preferred directions, that are either cheerfully accepted by our voluntary efforts or against which we struggle, often in vain. If these relations are of the more immediate and inseparable sort, we may speak of them as the "fusion" of mental images or so-called ideas. If they are of a somewhat more mediate and more analizable sort, we may follow the language current among the English School, headed by the Mills, father and son, and speak of them as "associations" of the ideas.

In explaining the fact of recognition, and the peculiarities which belong to different minds and different occasions, we may then make much of the "laws of the association of ideas." But neither by fusion nor by association of the mental images of past acts of knowledge can we explain the mysterious experience of recognition. There is always to be reckoned with, the active, consciously discriminating mind, facing the new object of knowledge under the predominating, but never quite complete, control of the results of past experiences of knowledge. It is this *re*-knowing which is the distinctively non-physical, human and rational performance in every act of finished recognitive memory.

All that has been said hitherto, and especially what has just been said about the fusion and association of ideas, tends to emphasize the individual nature of the problem offered in the words, What can *I* know? It shows how dependent its answer is upon the answer to another problem: What is it for me, as an individual mind, really to know? Stores of memory may be lying in reserve, or may be wholly lacking in my storehouse, which absolutely determine the character and the extent of the recognition which I can give, to things, to facts, and to laws, as well as to the moral principles which are accepted by me as worthy to control my conduct in intellectual and practical affairs.

The definitely personal, the integral, character

of this equipment of capacity and habits of recognition may be further illustrated and emphasized by referring to the distinction already made between the "fusion" and the "association" of ideas. The distinction cannot, indeed, be made in any absolute or fixed way, but it is real enough to serve well our present purpose. These "fusions" of the elements derived from past experiences constitute what is popularly called one's *idea* or *conception* of a thing. The "associations" awakened by every new act of knowledge may, the rather, be denominated the true answer which the conscious knower gives to the question, What do you *think of*, or *about*, the thing? or, often, merely the answer to the question, What does the thing *suggest* to you?

The wide differences between the ideas awakened in different minds by the same word was once illustrated for the writer in the following amusing and startling manner. He was giving a familiar talk on the subject to an audience which included the intellectual extremes, of a group of immature and thoughtless girls and the celebrated astronomer (no ordinary thinker on philosophical problems), Prof. Charles A. Young. It was agreed that when a certain unannounced word was "sprung" upon the audience by the lecturer every hearer should notice and report the first conscious impression. The word "Lion!" was selected and uttered in a somewhat dramatic fashion. One young woman could report noth-

ing but an involuntary shudder; the professor saw a perfectly clear visual picture of the constellation Leo arise in the heavens of the mind's eye.

If now these spontaneous fusions had been elaborated by each one's being required to think out the meaning of the word Lion, the differences would have been of another kind, and by no means so obviously great. But they would still have been most important and equally dependent upon what the activity of reminiscence could recover from the bits of knowledge stored up in the past.

In this activity of reminiscence, the discipline of will always takes a most important part. Set to, and held down to, work, it produces one result; let wander and play, it produces quite another result. When subdued by the power of habit, the associations may so enslave the mind as to destroy its power of recognizing some particular form of reality or application of æsthetical, moral, or religious principle. The knower becomes like Shylock, who confesses:

> "I should not see the sandy hour-glass run,
> But I should think of shallows and of flats,
> And see my wealthy Andrew docked in sand."

How inevitable it all was, this same victim acknowledges by the question:

> "Should I go to church,
> And see the holy edifice of stone,
> And not bethink me straight of dang'rous rocks?"

WHAT CAN I KNOW?

The importance of thinking for the result of accurate and full knowledge is generally recognized: as mere fact, then, it needs no enforcement. If you want really to know, you must think, is among the most familiar and universally accepted of didactic exhortations. But how think, how much think, and whether or when to trust to intuition and feeling rather than to thought to furnish the excitement and the guide to conduct, are by no means uncomplicated or easily answerable inquiries. Yet, the answer given to these inquiries is a chief determinant in the solution of the problem, What can I know? as well as in the practical problem, What shall I do, as one knowing what one is about? It will, therefore, receive in the next chapter an appropriate separate treatment. It is enough at present to note that, even in all the most prompt and seemingly immediate recognition, and knowledge through recognition, some thinking or traces of past thinking are inevitably involved. The leap to the glad judgment with which we recognize that human form as veritably the same dear friend whom we have not seen for years, appears to leave no interval for doubt that must be solved by at least a crude kind of syllogism before we can be really sure that we know. But in many cases, and probably in the majority of cases, even when they end in the most assured kind of knowledge (*sufficient* both for subjective conviction and for objective certainty) some

shadow of doubt is thrown across the path which leads to the final cognitive judgment. When you ask the scientific botanist, "What *is* this weed, or this flower?" or the scientific entomologist, "What *is* this insect?" he may seem to you to give instantly his reply. But he does not. At the best, he pauses to look for a fraction of a second before uttering the suspended judgment; at the worst, he looks long before he confesses his ignorance or gives a somewhat hesitating reply. Even these facts are enough to suggest, what we shall illustrate and enforce further, that no individual can be a knower without also being a thinker; and that one's capacity and acquirements for the latter form of functioning are sure to be just as individual as for the former.

In spite of the very unsatisfactory condition in which we are leaving our analysis of a completed act of knowledge, and our statement of the activities and limiting conditions of all knowledge; and in spite of the unfinished state in which we should finally be obliged to leave the answer to our question, What is it to know? quite enough has already been said to yield some valuable considerations of an intensely practical sort.

Plainly, to answer in the best manner one's individual, or personal problem of knowledge, one must cultivate in an individual way the power of prompt and accurate recognition. This power must be especially directed to all that has been learned through past experience, of facts

and events, of the qualities and causes of things, and of the laws of their behavior, as affording the principles that regulate life under the so-called "value conceptions," or "ideas of that which has worth." One must have a wide range of available *recognitions*, so to say. Then one must make use of these recognitions to increase the store of one's knowledge, in the interests of a worthier life. But *one must do all this in an individual way.* No man can take over another's store of knowledge. No two men can know things or events, or represent to themselves laws and principles, in precisely the same way. But there are certain common rules which must prevail in every man's self-development; though for each man in a different way. Have we not already shown that every knower is a child of the race; but also that every knower is an individual with an inheritance, an environment, and a habit of seizing or letting slip opportunity, — all of which are characteristically his own?

Now as to the retentive part of fitness for useful recognition, one can not enter and keep things in the storehouse of the mind as one stores half-used furniture in the attic or fresh vegetables in the cellar. The quicker these material things are put away and the more securely the doors are locked, the better stored they are. But with the things of the mind, the case is not so. The oftener and more closely we attend to them, the oftener we take them out for inspection and for

cleaning and for use, the better are the things of the mind stored away. Storing them involves the utmost possible use and testing and improvement by use: to keep them we must make them ever more fully our own, but not as though under lock and key.

Reminiscence, and the voluntary recall which enlists and often engrosses, and which sometimes so puzzles and baffles our powers of thinking, is a necessary part of that kind of memory which makes the faculty of recognition possible. But reminiscence too, is a matter of individual culture; each individual has a somewhat essentially different way of recollecting things. For each individual has more or less control over his trains of associated ideas, and over the processes of thinking by which he modifies and corrects these ideas. That the imaging faculty of different persons varies greatly in its natural character and acquired facility, is one of the most familiar and well established of psychological truths. Some are good visualizers, like those artists who are able by an act of imagination to seat their subject in the chair before them and paint his portrait from the mental picture. Others hear the tunes they recall, humming themselves softly to the inner ear. Still others have scarcely any vivid visual or acoustic reminiscences at all. With the great majority, if not with absolutely everybody, more or less of an inaudible "talking to one's self" accompanies most acts of reminis-

cence. The act of reminiscence is therefore mixed up with the kind of language which one is able to use, or somewhat habitually uses. The man not familiar with the language of science, or with certain of the higher forms of æsthetical or religious experience, can not "*reminisce*" in terms of such language. I was myself once told by the celebrated "ascetic Rajah of Benares," when I asked him how personal consciousness without a measure of self-consciousness could be retained in Nirvānā, that I could not understand the matter, because I did not speak Sanscrit!

From all these and many other similar considerations we draw the conclusion that the solution of the problem, What is it for me to know? will depend in large measure on the discovery by myself of what my aptitudes are, and on the cultivation of intelligent and steady habits of committing to memory what I learn, of thoughtful and frequent recollection, and of accurate and vivid imagination; but above all, upon the character and extent of the use made of my particular fund of knowledge for the faithful discharge of the practical affairs of the daily life.

In saying this last truth we come upon a whole set of considerations which enter into the problem of knowledge, in both a widely general and also a very closely-fitting peculiar and personal way, but to which far too little attention has been given by either the philosophers of the chair or the exhorters to a more practical philosophy of

life. These considerations have to do with the supremely important, the quite decisive rôle, which the emotions and sentiments play in all problems of knowledge. The conception of the knower, raised to the ideal terms of the highest potency, is not after the type of Browning's Empedocles, "A living man no more; Nothing but a devouring flame of thought, but a naked, eternally restless mind." Omniscience is not such a "naked mind" as that. The feelings, higher and lower, are always powerfully influencing knowledge. Some of them are essential constituents of every act of knowledge. In the case of every attempt to acquire knowledge, and every attempt to recall and use and increase the stores of knowledge, it is distinctly as important that one should feel right as it is that one should think correctly. Indeed without feeling right one cannot think correctly.

We are sometimes warned — and this with the best intent — against *prejudgment* when asked to form a sound new judgment respecting any alleged fact, or conventional practice, or debatable law or principle. But we cannot judge anything without prejudgments; these prejudgments constitute our stock of knowledge, and form standards to which we naturally expect all new objects, to a *recognizable* extent, to conform. All moralists agree, however, to the maxim that these prejudgments must not be allowed to degenerate into unconquerable prejudices. But

here again, our inquiries are thrown into confusion; for what one man considers only fair judgment held with honest conviction, another considers unreasonable and bigoted prejudice. And nothing is more injurious to science than the prejudices of its devotees against — and quite as often, in favor of — new discoveries, new laws, new hypotheses. In politics, partisanship is the cause of more backsets and blunders than is either irremovable ignorance or open corruption. While the arch-enemy of moral and religious progress, the very "devil to pay" in almost all social and ecclesiastical quarrels, is the spirit of bigotry. But in none of the fields of knowledge just mentioned can any fixed rules be given to determine for every man what of his prejudgments may reasonably stand self-accused of being unscientific, partisan, or bigoted. Every man who wishes to solve wisely for himself the question, What can I know? and who understands how essentially his emotions condition for every knower the answer to the question, What is it to know? will, however, be on the alert to suspect himself as taking a prejudiced attitude toward all alleged new truths which do not fit in with his outfit of prejudgments. Instead, however, of summarily flinging overboard these prejudgments in the effort to make himself a "naked mind," or, indeed, dismissing any one of them which belongs either to the top or the bottom of his store of knowledge, he will, if it seems worth

while and he can spare the time, examine anew the reasons which led him to the concluding of them. The oftener and more thoroughly and candidly he does this, the more will he make of himself a knower with a fair and open mind. Even so, the question, What can I know? will remain a very precious and particular one.

I have said that there are certain emotions and sentiments which are essential elements in all knowledge. In a way, this may be said of all the emotions themselves. No one can *know* what it is to be angry or envious or jealous, or to be kindly and cheerful, to long, to love, to hate, to aspire, and even less to have the sentiments which go with the ideas of value in the spheres of art, morality and religion, without himself *having* had a living experience of those very same emotions.

It is almost equally obvious that without the feelings of curiosity, interest, and desire for various kinds of good, the seeds of knowledge, if they could be planted in human soil, would suffer only a stunted growth or a speedy decay.

In the passage already referred to, Kant spoke of *conviction* and *certainty* as essential elements of our knowledge. But these are sentiments, and yet they form in large measure the final tests and guaranties of all human knowledge. These feelings, therefore, require from us, as indispensable to any semblance of an answer to our problem, some special treatment.

One truth we are already beginning to see; it has been more and more clearly apparent with every forward step in the discussion. *Knowledge is a matter of the entire man.* All the capacities and faculties, all the opportunities, whether diligently improved or sadly missed, enter into its very warp and woof. I can know, according to the standard of what I am as a knower; and the real knower is the whole Self, not as a "naked mind" but as a living soul.

CHAPTER III

ON THINKING ONE'S WAY THROUGH A SUBJECT

THAT one cannot acquire knowledge, at least in any extensive and elaborate way, without "Doing a bit of thinking," is the popular understanding. This popular understanding is amply confirmed by all the various branches of psychological science. To think it out for one's self, or to study the thoughts of others, is necessary for the mastery of any complicated matter, whether it concerns some disputed fact of observation, some doubtful event, some attempt at classification, some law of nature, or principle of social or private morality. In business and in politics, as well as in science or in theology, thinking must lead up to sound knowledge, and to the use of such knowledge in the conduct of life.

So intimate and true is this relation between thinking and knowing, that the two words are not infrequently employed as though they might be interchanged to represent essentially the same processes. We do not indeed customarily use the term "thought" for the act of immediate

recognition through the senses. If one is asked to judge a thing with the name and character of which one is perfectly familiar, one says: "I *know* that thing, that it is properly so named, and at least in some good degree what it is." In general, when giving satisfactory attention to the object in the full light of day, men do not express their mental attitude toward it by affirming, "I *think* it is this or that," but the rather, "It *is* this or that." Let, however, the least doubt arise in the mind, either of the person who makes the affirmation or of any of those to whom the affirmation is made, and the significant question follows: "Do you really *think* so?" or, "Why do you *think* so?" These questions imply that more of thinking should now enter into the attempt at recognition; and that the claim to success in recognition must be confirmed by placing it on a ground of reason valid for others as well as for the one who makes the affirmation. To recur again to the language of Kant: The "subjective sufficiency" which has served for the knower's own *conviction*, requires still to be transformed into the "objective sufficiency," or *certainty*, required for a finished act of knowing.

It is in view of these very true and useful considerations, which are more or less obscurely felt by everybody but require the analysis of the skilled psychologist in order to bring out their deeper meaning, that our most ordinary language about the acquisition, possession and use of knowl-

edge, deserves to be interpreted. "Think it over, and when you have made up your mind, let me know." "What do you think this is?" and "What does he think about that?" belong to the same order of well-founded inferences as embodied in the language of daily life. In fine, it is only the man who thinks and thinks to some good purpose, that can get and hold and employ to serve his ends, any considerable store of knowledge.

We have already seen that some previous thinking must have been employed upon the so-called data of sense-impressions, in order to make possible that recognition in which so largely the seemingly most immediate acts of knowledge through the senses consist. In what is called a *sense-perception*, as distinguished from a tangled mass of *sensation-complexes*, selective attention, discrimination, association of mental images, and other of the more primary intellectual processes have already taken place. Without some of this rudimentary form of thinking, the new-born baby of the human species could never learn to know either things or its own Self, as all adult and mentally sound human beings do.

It is not, however, of that primary thinking which is necessary, so to say, to the formation of an object recognizable by the mind, but, the rather, of thinking one's way through, or at least well into, a subject that we propose to speak in the present connection. The kind of intellectual performance, which manufactures a store

of more varied and accurate knowledge by the processes of thought, has, on account of its very nature, been called by some psychologists "the Elaborative Faculty." Such is the term adopted in the somewhat pompous and over-refined divisions of "cognitive faculties" by Sir William Hamilton. "This," says he, "is Thought, strictly so called; it corresponds to the διάνοια of the Greek, to the *Discursus* of the Latin, to the *Verstand* of the German philosophy; and its laws are the object of logic." So stiff and seclusive a conception of thought as a fifth kind of the class called cognitive faculties, and its subjection, which, for a long time, was little better than an onerous and deceptive slavery to the laws of formal logic, has ceased to commend itself to modern psychology. But the term "elaborative," as applied to this sort of thinking, is not altogether inappropriate, — especially when the creation of thoughts by the "freeing" of the mental images from their concrete and individual features, and the relations of thought to language, are discerned and taken into the account.

The nature of the general concept, and its dependence on concrete mental images, was hotly debated by the schoolmen of the Middle Ages. The contentions of these schools were made matters of grave theological importance. Rival schoolmen were prone to accuse their opponents on this philosophical point of being guilty of destructive, if not deadly, heresy. The nature

of the general notion, and whether there is any such thing in mental experience, is full of mooted questions and unsettled controversies, even down to the present hour. But this debate does not so affect the importance of our question, What is it to know? in its relation to the main problem of the individual thinker, What can *I* know? as to obscure or diminish his interest in it. Whatever psychological analysis may prove or disprove as to the elements entering into thought, it still remains true for the individual knower that, if he either *can* not or *will* not learn to think, he will never acquire any worthy store of accurate and useful knowledge. Indeed, we might at once go much further than this: the thoughtless man cannot be a good workman in any sphere, cannot be a socially or morally worthy man. And he certainly can never lay for himself any grounds for a reasonable and tenable faith respecting the great truths of God, freedom, and immortality.

The thing of first importance to notice when considering how we shall undertake, and how proceed, to think our way through a subject is this: Thinking, if it is going to contribute either to the confirmation or the correction or the increase of our knowledge, must come to its conclusion in some form of a *judgment.* It is only as we *judge* that we can be said to know anything. It is this; it is not that; It was thus; it was not so; It belongs to this class; it does not belong to that class; Its causes are these; its causes are

not those; This, and not that, is the law which governs in such cases as the one under discussion, etc. These and such mental attitudes as these, we will call "knowledge-judgments."

As long as the thinker has not arrived at some kind of a judgment — it may even be, "I am not sure, but I think so," — he has made no real advance in the direction of knowledge. The Hon. E. J. Phelps once told the writer the story of how his professor, when he had made two different attempts to answer a question of law, had met him at the end of each with the quiet remark, "That is not correct"; and how, when he had been goaded to the confession, "I do not know," the professor remarked just as quietly, "*That* is correct." In this case, as in innumerable other cases, *I do not know*, is the only way to tell the truth of what we do know. But, "I do not know," is a judgment.

We are of the opinion, based not only on psychological science but also on facts of common observation, that much confusion of thinking and no little practical mischief have been caused by those who, like the late Professor James, in expounding their theories of the nature and meaning of knowledge, have dwelt so exclusively on the truth and the falsity of "ideas." But *ideas*, as such, can neither be true nor false; to apply these terms to them is to commit, in the interests of popular clearness and charm, a harmful scientific blunder. *Only judgments are either true or false.*

And this is true of all judgments, — namely, that they are of necessity, either true or false, or partly true and partly false, — whether they are judgments affirming relations of ideas or relations of real things. Let us take, for an example, the idea of that mythical animal which has so often served to illustrate the distinction between subjectivity and objectivity in forming conceptions, the idea, namely, of a Centaur. As gained from the reading of Greek mythology and from consulting the dictionary which I trust, my idea of a centaur is: "A fabled monster, having the head, arms, and body of a man from the waist up, and the body and legs of a horse." Now, is this idea of a centaur false or true? As an idea, pure and simple, it is neither the one nor the other. The instant I attach by an act of thinking any form of a judgment to it, the idea becomes either true or false; but then it loses its characteristic of being merely an idea. Not having the historically correct idea of a centaur, I might before consulting a dictionary, have conceived of this fabled monster as just half-man and half-horse in the reverse direction (upper part horse, lower part man). In this case, I should have uttered a true judgment, if I had simply said, that is *my* idea of a centaur; but if I had meant: Such was the conception in the mythology of ancient Greece, I should have uttered a false judgment. The judgment, which would have been both subjectively and objectively *sufficient*, would have

been the one forced from the reluctant law-student by the persistent professor, — simply I do not know.

It follows, then, that only such thinking as leads to sound judgment contributes to the refinement and the increase of any man's store of knowledge. But processes of thought which *end* in the conclusion, *I* do not know, or Such, whatever may be the truth, is *my* idea of the matter, fall far short of the requirements which are put upon us by the demands of our rational faculties and by the stern exigencies of the practical life. Both society and conscience agree in urging the obligations of knowledge. About a great variety of things they both exhort the individual thinker: "If you do not now know, it is high time that you did know; Go to work and learn, before the penalties of ignorance fall on you in the form of some final disgrace or overwhelming disaster." Men who are continually proclaiming "my idea" of this or that, unless one pardons them as unskilled in the use of English, or as thoughtless followers of a false psychology, are apt to be heard with contempt.

It takes no large measure of reflection to make clear the reason for the prevalent contemptuous attitude toward a cowardly subjectivism; and the reason reveals one of the profoundest of all philosophical truths. If one may for once employ the technical language of philosophy, it is on this truth that the foundations of both episte-

mology and of metaphysics are solidly laid. No amount of scepticism, and no resort to seductive rhetoric in the use of misleading figures of speech, can shake these foundations. Simply stated, the truth is this: All human science, all human faiths, all human conduct, assume, expand, confirm, the correlation between knowledge and reality. It is not simply or chiefly our own ideas or mental attitudes, which we wish to know, and do our thinking in order to know; it is real things, their qualities and relations, actual events, their causes and laws, moral principles and religious faiths that are in fact available for the better conduct of actual relations to other men and to the world at large. Whether we are through and through deceived in all this, and how far an absolutely sceptical and agnostic attitude toward all human knowledge can maintain, or even state, itself without falling into pieces through internal contradictions, — these problems do not concern us at the present time. But to talk about knowledge as only *of* phenomena, or as having for its *object* only "appearances," and to set over against the phenomena an impenetrable world of so-called "noumena," or of realities that have no conceivable appearances, is to introduce hopeless confusion into the conception of knowledge by an absurd use of language in the very description of the act of knowledge.

The practical outcome thus far, of our answer to the question, What is it to know? in respect of

the thinking which is necessary to knowledge, is the maxim that one must be continually looking after one's judgments. To have one's mind stored with judgments that correspond to the reality of things material, and of persons, and of both in their actual relations (knowledge-judgments), is what every individual who aspires to be a knower must achieve as a thinker. To be a knowing man, one must be habitually and consistently a thoughtful man.

It is customary, especially in these days when the effort has become so violent, and even in not a few cases, so unscrupulous, to free all minds from what are rhetorically called "the trammels of the past," and when the estimate is so extreme which is put upon any one who can, by using unfamiliar language, deceive those ignorant of history into rendering him praise for his originality, to ask every individual thinker "to do his own thinking." Every babe is encouraged to think for himself. Now, in some sort, the very conception of one individual doing another individual's thinking for him, is a plain absurdity. Thinking is essentially, and must always remain, a form of mental activity which can be performed only by the thinker himself. What really takes place in the case of those who do not think for themselves is that they take the judgments of others — the conventional judgments or the private judgments of those whom they elect to trust. — without really making them their own by pro-

cesses of thought. That is to say, they do not really think, at least so far as to arrive at the only terminus of thinking which contributes to the increase of knowledge; and this is a judgment concerning the real and the actual. But those who make a great show of thinking out things for themselves, and are very suspicious about taking for true the judgments of anybody else, are, as a rule, as little qualified for concluding a sound judgment as are those who refuse to think at all.

There is not one in ten of the truths which we must know, in order to have common-sense and to guide aright our daily conduct, at a judgment about which we have arrived, or ever could arrive, by thinking them out for ourselves. Many of these truths, and especially such as are truths of fact, we have had incorporated into our lives, by the steady pressure of environment, or by the process of enforced learning. Indeed, in all learning, as conducted by means of books and oral instruction, when forming our judgments, we properly defer to men who, by prolonged and accurate observations, followed by thinking the data through to the end of well-grounded judgment, know the nature and operations of things physical, mental, and social. Only a small proportion of the race, or of men in any period of its history, or of any particular community, can possibly think their way through any considerable number of subjects; or even, in these days of the enormously multiform division and subdivision

of subjects, through any one of them so as to arrive at an available list of knowledge-judgments authoritative for all.

The vast multiplication of resources of information as to the judgments formed by the men who ought to know, and this extending to the remotest times in the history of the whole race, makes possible a relatively large accumulation of knowledge for the average man. Knowledge and wisdom that were hidden from the most gifted and profound thinkers of the past centuries are on the lips, are more or less lodged in the minds, and given control over the lives, of babes and sucklings, at the present time. But even in the acceptance of these judgments the would-be knower is by no means wholly discharged from the obligation to do much thinking for himself. This obligation grows by an inner and inescapable necessity out of the fact that his answer to the question, What can I know? must always remain so much a private and individual affair. All these judgments which, from generation to generation, add to the richness of the world's knowledge are "general judgments"; that is they are applicable to classes of things, to conditions most widely prevalent, etc. A "good bit" of thinking is therefore necessary in the majority of cases, in order to form a sound judgment as to the manner and degree to which, just at this moment, and in view of the peculiar conditions of this moment, they are applicable to any one of us. *We* must

do some thinking to find this out. And since our grounds of the "application-judgment" can never be absolutely complete or perfectly clear, we must be satisfied with a probable judgment. Whether we call this probable judgment by the name of knowledge, or not, it is the kind of a judgment in reliance upon which our most important daily interests must be staked.

There is, however, another and more encouraging side to the truth which has just been called to our minds. In the case of many of these judgments which we must take mainly as the result of others' thinking the subject through for us, we have certain data, which we may ourselves work up, that are derived from experiences of our own. The value of these personal data will depend upon the way in which we have observed them, stored them in the memory, upon our ability to recall them, and especially upon our ability and our willingness to think their meaning through to the conclusion of a sound judgment. But all these personal qualifications for a thoughtful attitude toward the truths embodied in our own experiences are matters of cultivated habit under rules of semi-moral semblance, if not of a perfectly explicit moral character. In every individual we recognize the important truth that thoughtfulness and sanity of judgment are dependently related.

How our own thinking enters into the judgments which *appropriate* the knowledge of others,

even when we never could have acquired any considerable part of that knowledge by thinking it out for ourselves, may be amply illustrated by matters physical, economic, social, moral and religious. I may, for example, know by thinking over my experience that some other kind of fertilizer than that recommended by the local Agricultural School is best for *my* garden; that some other diet or kind of medicine than that prescribed by the medical profession is best for *my* dyspepsia; that the social conventions recognized by my surroundings will not satisfy *my* conscience; or, that in spite of the general agnostic theology or lack of experience of the community, I have an adequate and satisfying knowledge of *my* God as *my* Redeemer. And if any one, having an overweening confidence in the generalizations of the economists, of the prevalent Schools of medicine, of the prevailing views on morals and religion, however fortified by volumes of collected facts, or alleged facts, and of ethical and religious psychology and philosophy, — if any one, I say, with an overweening confidence in these scientific inductions, disputes my claim to knowledge because it is based on thinking over my own experiences, there avails the valid reply that all human knowledge is, of necessity, placed on a constantly variable and perpetually shifting basis of individual experiences.

Being thoughtless, whether it be due to lack of the ability or of the habit of thinking, is sure to

result in hasty and ill-formed judgments. The opposite of thinking one's way painstakingly through a subject is to skip as many as possible of the links in the chain of reasoning which would in accordance with the laws of thought lead at the last to a logically established conclusion. Thoroughness, or *through*ness, in thinking is opposed to jumping at conclusions. We are therefore exhorted not to "jump at conclusions," but to "stop to think" before we conclude; to "take time to make up our minds," that their *making up* may bear the inspection of that tidy housewife, the so-called logical faculty. But plainly, in many and even perhaps in the great majority of cases, nothing could be more highly unreasonable, in the most practical and useful meaning of that much abused word, than *not* to jump at our conclusions. If we see a child standing in the way of an automobile or tram-car, we snatch him out of the way; because we have reason to fear that he does not as yet know enough to proceed with the requisite speed to the proper conclusion. If we see the same danger threatening ourselves, we do not stop to think; indeed, stopping to work out a conclusion by a process of thinking which regarded consciously the laws of formal logic, would almost certainly be fatal. We jump to a conclusion, the quicker, the better; and it is a conclusion which promptly executes itself in our psycho-physical jumping apparatus.

Within certain limitations, which cannot easily be fixed under *a priori* rules, the more a man knows, the more he jumps to conclusions; and the wider is the range of conclusions to which he can jump with the tolerably safe assurance that his jump will land him on the other side of the bog into which ignorance would fall, and upon the solid ground of verifiable knowledge. The primary condition of the knowing and skilful driver of a locomotive or an automobile is just this, that he shall not have to stop to think. His knowledge has become so incorporate in his very being that he instantly arrives at the correct conclusion, no matter how complicated the situation which forms the minor premise for the syllogism he has to solve. His cerebral and nervous-muscular reactions instantly execute the movements that realize the mental attitude to his problem. Indeed, he who solves the personal equation so splendidly, because he knows his business so well, is scarcely aware of any even instantaneous mental attitude other than a mixture of sensations and emotional stirrings. Traces of logical thinking are hard to discover.

It is not only, however, in such practical emergencies as those just described, that knowing shows itself at its very best in the ability to jump to conclusions, without any appreciable resort to the so-called elaborative faculty. What we have called recognition, as an essential factor in all knowledge, involves such a process. The more

a man knows about things, their qualities and changes, or about events, their causes and the laws which control them, the better fitted is he to conclude with an apparent absence of the process of thought, what they are, and how to explain and to use them. This is not because his knowledge has made him hasty in judgment or thoughtless and unsafe in matters requiring prolonged thinking. It is, the rather, because his previous thinking, on a foundation of varied and careful observations, has so to speak, provided him with a great fund of judgments already made and incorporated (perhaps, we have no better word) into his very being. This fund is his reward for having been observing and thoughtful in the past; it is his store in the savings-bank of the mind. It is not diminished by using it for current expenses; it is more sure to be increased by constant use. For no one, no matter how expert in any kind of knowledge, is always infallible when he jumps to his conclusions; nor, for that matter, when he arrives at them by the longest route followed in the effort to think them through to the end. Indeed, as we shall see later, infallibility is not the characteristic of any form of human knowledge; nor is it given to any man to think any subject through to the end. But the mistakes which the knower makes in his "jumped" conclusion set him to thinking over the subject in order to find out in just what those mistakes consisted. This new process of thinking breeds

caution, where it is possible to use caution, when the next occasion comes for arriving at a similar conclusion; or, in time, it occasions a more or less decided modification in the character of the conclusion at which the mind habitually and spontaneously arrives. For example, a physician skilled in diagnosis is called to see a patient who is broken out with a rash. If the disease is not sufficiently developed, the more knowing the doctor, the more slow he will be in judgment; the more he will wait for further evidence and take time to think the symptoms over. But suppose that the eruption is in small raised dots, either separate or in crescentric patches, he will immediately conclude that it is a case of measles. But if it is a diffused scarlet rash, extending over the skin and mucous membrane of the throat, he will be equally prompt to conclude a case of scarlatina. While a pustular eruption following the course of a nerve will be at once pronounced a case of *herpes zoster*.

Jumping at conclusions, as a means not only of expressing but of extending knowledge, is not by any means confined to such cases of ordinary experience as have thus far been employed to illustrate the benefits it confers. In fact, almost all the happiest conclusions in business, invention, state-craft, and science, have been "jumped into," in the first instance. It is of the very nature of a discovery to come in this way, — especially if the discovery belong to the invisible and spirit-

ual realm of natural law or World-order, or of moral and religious principles. It is to the men of vision — as we say impressively, comparing this seemingly immediate seizure of truth with the recognition of the eye when it faces a familiar object — that this kind of new knowledge comes. Thus they are often said to "intuit" it. In its highest form this way of knowing things is not infrequently considered as the supreme mark of genius. As said Professor C. C. Everett: "Genius works less by a process of conscious reasoning than by a flash of intuition, and less by abstract conception than by a prophetic beholding of results." Intuitive knowledge, as a way of knowing that could claim absolution from all the laws of thinking and from the obligation to think one's way as far as possible through a subject before arriving at the knowledge-judgment, was claimed for a sort of rational face-to-face presentation of God, by St. Anselm; for the immediate cognition of the Absolute as a positive conception, by Fichte and Schelling; and the same way of knowing has been made by the Mystics of all ages the sufficient ground and proof of all manner of unverifiable claims to knowledge, and even as an excuse for holding absurd and self-contradictory conceptions. At the present time in philosophical circles, Professor Bergson and others are busy at the work of discrediting the intellect and its duty of clear thinking, to which is given the pseudonym of "Rationalism," in the interests of what they

are pleased to call the faculty or act of "Intuition." Certain biologists, reviving in another form the extremes of Schopenhauer, who deliberately aimed to subordinate intellect to blind unconscious Will, are diligently trying to show how superior is what they call "instinct," even in its lowest manifestation as an almost purely unconscious psycho-physical affair, to the conclusions which human minds reach by deliberate and elaborate processes of reasoning.

The sufficient reply to all devices for dispensing with the obligation to do as much as "in one lies," of the work of the intellect in its effort to arrive at knowledge, and so to place one's *convictions* as to what *is* true, or one's *guesses* as to what *may be* true, on grounds of *objective certainty*, is to be found in the facts of psychology. First: Intuition, of itself so to say (and much less instinct), never amounts to knowledge; and, second: There is no such mental process or attitude as intuition which does not of necessity involve all the other processes of the intellect as well. Intuitions of truth do not arise in minds that have made no preparation for them by repeated efforts to think their way through the subject with which both the thought and the intuition, so-called, are concerned. Such intuitions, when they have arisen above the horizon of the conscious mind, no matter how clarifying and welcome and relieving of painful doubt they may appear to be, do not as yet constitute knowledge. They must

be thrown into the crucible of thought and tested there. And if they concern large and new claims to knowledge, they must be able to endure the heat of argument, the thrice-heated fires of controversy. In one's study, or in one's bedchamber, one may recline in unreflecting delight, or even bow down in worship, before one's intuitions; but he who sends out his intuitions with the claim to be accepted as facts or truths knowable by others, is an intellectual coward, if he calls upon himself or others to accept them without being subjected to the process of a thorough testing by the intellects of his fellow men. To separate in one's philosophical theory intuition from intellect, and to subordinate the whole to the part, is to be guilty of a most obvious, but serious, psychological fallacy. Flashes of intuition, resulting in the leap to new conclusions concerning the truth of things, are in all departments of truth, necessary adjuncts to the progress in knowledge of the individual and of the race. But they are the fruits of previous efforts to think through a subject, and they must themselves be subjected to the tests of further thinking, before they can be garnered into the storehouse of knowledge.

And now the question arises, How shall one think one's self into and through any subject, when the need of an enlarged and corrected judgment is either demonstrated by experience or suggested by some form of so-called intuition? The old-fashioned psychology gave an easy answer to this

forever difficult and complicated question. It bade us follow the "laws of thought." To think one's way toward, or clear up to, a valid knowledge-judgment, one must pursue the correct path; and this correct path was defined by the established principles of formal logic. Well-*established* these principles certainly appeared to be; for had they not maintained themselves unaltered and almost uncontested from the days of Aristotle down to within a century of the present time?

When the further, more definite question was asked, What precisely are these inexorable laws of all correct thinking? the answer was found in the well-known "Principles of Identity and Difference," and of "Sufficient Reason," and in the logically valid forms of the Syllogism. Be *logical* in your thinking was then the advice which must be followed by every thinker who is ambitious to think his way to the position of a knower. Only thus could he say; "I know this judgment of mine to be true (to be 'sufficient objectively') because it corresponds to the truth of things."

But there are objections, theoretical and practical, to the utility of the laws of thought as they were customarily proclaimed in treatises on Formal Logic. In the first place, these laws bore little or no resemblance to the actual processes employed by living and active human minds, whether in the discovery or in the testing of knowledge. And even if they did represent certain purely formal ways of the mind's arriving at

the goal of knowledge, they themselves required in their abstract form the guarantee of a good thinker, in order to make them usable for solving the peculiarities of that particular thinker's individual case. It may even be shown that, when taken in their strictest form and interpreted as infallible guides to knowledge, they involve all the fallacies which they are recommended to avoid. In a word, the human mind does not in fact think as the formulas of Logic would have us believe that it does; and even if humanity in the abstract did so think, the individual thinker would need to know all the lessons they are designed to teach, and much more, both as to the constitution of the real World and as to the working of his own mind, before he could make these forms of much use in his own case. The formulas are indeed dry shells, and no living organism ever wriggled out of them into the clear light of life's work-a-days.

We are well aware that such fearful heresy as has just been uttered will greatly stir the teachers and writers of treatises on Formal Logic. But we may illustrate our contention without attempting to prove it.

What is the real truth, concealed and smothered rather than revealed, in the logical formula for Identity? This formula is "*A* is *A*" or $A=A$, and the reverse is the principle of Difference: *A* is not *non-A*. If then we wish to think to the end of knowledge, to the goal of a judgment that

corresponds to Reality, the conceptions which we use in our thinking must remain self-same. But no object of human knowledge, and no conception of any human mind, that is supposed correctly to represent an object of knowledge, ever for so much as a single instant remains identical with itself, self-same in the strict meaning of the word. The very existence of everything, non-living as well as living, material as truly as psychical, consists in perpetual change. At no two instants of their existence, whether we occupy the standpoint of the observer or the standpoint of the nature of the thing, are physical objects the self-same. The essential nature of events is that they are series of changes in the appearances and relations of things. The formulas which we call laws are designed to express in general terms the order customarily observed by things in their changes of quality and quantity, and of causal and other relations to one another. The whole World as known to man is an infinitely intricate network of intercrossed and ceaseless changes. Nothing is identical with itself.

In his effort to give an indisputably sure and immutable foundation to his own philosophy, the great thinker Fichte took his point of starting from the proposition: "The Ego posits itself" and it does this trick of positing in terms of the identical proposition: Ego=Ego, or *I am I;* and over against itself it posits another as *non-Ego,* as *not-I.* Whatever we may think of this

attempt to tell us something about the nature and procedure of the Absolute Ego, — a matter which has little bearing on our present problem, — we are compelled to say that of all beings with which we have any acquaintance, or any hope of acquaintance in the future, the human Self is least entitled to claim any such identity as that implied in this formula of logic. The very essence of the Self is to be alive, to be ceaselessly changing, never at any two instants of its existence, to remain precisely the self-same. Indeed, no man can say to himself, and be aware of what he is saying, the simple sentence, "I am," without being a changed man before he gets to the end of this simple sentence. And the profundity of the change will depend upon the amount of thought he puts into the sentence. This change may amount to a mental revolution, to the birth of a transformed personality, as indeed, it did in the case of Jean Paul Richter. "Never shall I forget," says this man "of a pure and sensitive spirit," "the phenomenon in myself, never till now recited, when I stood by the birth of my own self-consciousness, the place and time of which are distinct in my memory. On a certain forenoon I stood, a very young child, within the house door, and was looking out towards the wood-pile, as, in an instant, the inner revelation, 'I am I,' like lightning from heaven, flashed, and stood brightly before me; in that moment had I seen myself as I, for the first time and forever!" And yet this so-

called self-consciousness is the ground of the principle of Identity.

Not more tenable or useful is the principle of Sufficient Reason, in the form in which it is stated for us in formal logic. *Some* reason or other we may indeed be asked to give as to why, in mooted or doubted judgments, we espouse one side rather than another. But not all the causes which contribute to the nature and changes of any simplest thing, or to the production of the seemingly least intricate event, can ever be known to human minds. The simplest thing really *is* much more than can be observed, or thought, or even dreamed. The commonest event has its origins deep down in the Universal Being, and the history of its occurring involves the history of the World at large. If by *sufficient* reason we mean the complete account of the causal influences, physical and spiritual, the forces that have produced, the occasions that have combined, the elements that have composed, the ends that have been served; who will undertake to answer any problem of knowledge with a quite sufficient reason? But if we mean sufficient to produce conviction in our own minds, the answer to the question, What can I know? is largely a private affair. And if we mean sufficient to impress others with the certainty of the judgment, — taking into account the great differences in opinion and points of view on every truth corroborated beyond doubt by universal experience, — even then the answer

to the question, What is a sufficient reason? is almost equally equivocal.

If now we examine in the same way the verity and the usefulness of the different forms of the Syllogism, and the rules which they prescribe for logical thinking, we are not greatly relieved of our perplexity and tendency to invulnerable scepticism about the fallibility of all kinds and degrees of human knowledge. As has often enough been pointed out, the stock example of the surest form of deductive reasoning itself involves an ineradicable fallacy. "All men are mortal; John is a man; therefore John is himself mortal." But, how do we know that *all* men are mortal, unless we know that John, too, is a man and mortal? And if we *know* this about John in particular, why do we need to refer our knowledge to a still doubtful major premise? It is customary in these days of confidence in the certainties of science to help our lame syllogisms to walk on all fours by discoursing about the inevitable working of natural forces and the unexceptional reign of natural laws. But the more we know about science, the more we know about its own natural fallibility. Experience has taught us that most human organisms — perhaps all we have ever examined — appear to have what we call "the seeds of death in them"; and that as a matter of fact, they have died. John is to all appearances like all the rest of us; we cannot avoid thinking that he, too, will

end his bodily existence in the same way. We *think it* with such conviction, and on grounds of evidence which produce the same certainty attaching to the judgment in other minds (in the general public and especially in the minds of men who know most about the constitution and probable destiny of every animal body), that we are sure we have reached a *knowledge-judgment.*

Are we then to believe that there is no use in trying to think one's way through a subject, and that all judgments about affairs practical and matters scientific and speculative, are to be regarded as alike fallible, and so not worthy of the claim to constitute quite trustworthy elements in the structure of human assured knowledge? By no means so.

Two truths, which will in due time be more fully established, must be granted as affecting the answer to the question, What is it to know by the way of logical thinking? Logical thinking can never render knowledge infallible; much thinking can never render knowledge complete. All knowledge-judgments that are arrived at by thought are only approximately accurate, and are endowed with only a greater or less, but never with a perfect, "objective certainty." And there is no end to the growth of knowledge by thinking. For every thing and every soul *is* more than we can know or even *think* it to be; every event has more to both its causes and its effects than can be traced by thought; every law and prin-

ciple is more profound and extensively applicable than the depths which the intellect of man can sound by observation or by logic.

But every man may attain knowledge and growth in knowledge, corresponding in some good degree to the range and the accuracy of his thinking. If he thinks according to the principles of Identity and Difference, he will discover as far as possible by observation, inquiry of others, and reflection, what is the customary order of changes in which the true nature, as known by us, of each thing, and the true explanation of each event, essentially consists. He will also be discriminating; and where this "customary order" is departed from, he will ascribe the departure to some hitherto undiscovered quality of the thing, or element in the total cause; or else he will assign its source to some different thing or some different order of events. His reasons for his judgments he will continually strive to make increasingly "sufficient"; but he will remember that different judgments, even when they are held as knowledge-judgments, must have different degrees both of the conviction and the certainty attached to them, if they are to be held in accordance with our experience of actual events and of real things. And in thinking his way to these more sufficiently reasoned judgments, he will be alert to seize every new opportunity for clearer evidence, in whatever way it comes to him, or in which he by diligence may gather it;

he will test all the suggestions arising in his own mind or proffered to him by others; and he will strive for consistency in the arrangement of his thoughts and for harmony in his conclusions along the different lines of his thinking. But above all will he choose to free his thinking from prejudice, from self-deceit, and from rhetorical claptrap and chicanery. In other words, he will persistently aim to be a moral man in his thinking, — sincere, patient, humble, apt to think, not only of himself but also of all things, "righteously, soberly, and as he ought to think."

CHAPTER IV

ON BEING SURE OF WHAT WE KNOW

WHERE thinking, or believing, or opining, or trowing, or dubitating, passes over into knowledge, the most distinctive feature of the change in mental attitude is an increase in the assurance with which the judgment is pronounced. We were in doubt; we now feel sure. Not long ago, we only conjectured or guessed at the truth; at best we were only partially convicted of the real value of our impressions; but this new evidence, or new point of view, or sudden flash of insight, has thrown light on our problem, and for the present we are satisfied that we have the problem solved in accordance with the facts. We therefore settle our minds down on the basis of a knowledge-judgment. As conscientious persons in the making of all such judgments, we formerly hesitated either confidently to affirm or confidently to deny. We now affirm or deny with a diminished degree of hesitancy; or, perhaps with a total absence of the feeling of hesitancy.

Such statements as those just made are confirmed and consecrated both by the popular

language and by the psychological analysis of the act of knowledge. "Are you perfectly sure?" is the question to which all men want an affirmative answer before they resign themselves to the judgment of the expert in some particular field of knowledge, or of the proffered guide in the conduct of life. Whether it be an investment of money, a diagnosis of disease, advice for the use of the agriculturist or the manufacturer, a principle of morals or a doctrine of religion, at least a tolerable amount of conviction is required as a guaranty of its certainty. Psychologists have distinguished a so-called "Sentiment of Truth," or more correctly styled, a "Feeling or Sentiment of Conviction," as an essential factor in every form and degree of knowledge. "To know is to be certain *that* something is," says one of our older writers (Porter) on psychology; and, we might add, to be at least to some extent certain, *what* that something in particular is. Here again we may refer to the Kantian distinction between the conviction which is the test of subjective sufficiency and the certainty which is based upon objective sufficiency.

When we consider the facts of real life, however, it at once becomes obvious that being sure of what we know and knowing truly are two widely different things. Indeed, we may say that the amount of assurance with which any individual affirms any particular claim to knowledge is no proof whatever of the validity of his

claim. In saying this we need not appeal to those claims which are made with some self-interested or dishonest motive in view. We know that the most dangerous scoundrels or untrustworthy fools are, somewhat regularly, those who try to arouse confidence in others by working themselves up into a passionate assurance of the truthfulness of their claims to knowledge. Even with the most sincere and guileless persons, assurance of knowledge is in itself little or no guaranty of the actuality of knowledge.

The emotion of assurance, whether it attach itself to some form of belief, or to some one of those mental attitudes which we desire to distinguish from mere belief by calling them *knowledge*, when considered as a form of reaction characteristic of the individual, is an affair largely of temperament. Some persons are naturally careless and some naturally cautious about forming knowledge-judgments. Both the careless in their judgments and the cautious in their judgments may be more or less sure of the truth of their respective conclusions when formed as the result of differences in temperamental reactions.

We might, indeed make a brave show of distinguishing four classes of minds as divided by the character of their feeling or sentiment of intellectual conviction. Thus we should have (1) the quick and sure, (2) the quick and still doubtful or not quite sure, (3) the slow and sure, and (4) the slow but never quite sure. So many different

ways are there for the making up of one's mind and of settling it in a position where it can be cemented firmly with the feeling of certainty. The result of this is, as Montaigne long ago pointed out: "Every opinion is strong enough to have had its martyrs." The vagaries concerning "the whole distribution of all the regions of the great invisible," the "things which Jesus had not told his disciples," are asserted in terms of knowledge by the writer of that curious early Christian treatise called PISTIS SOPHIA (or FAITH that *is* KNOWLEDGE), as indeed the vagaries of the late Mrs. Eddy are propounded in modern Christian Science literature, with all the assurance which belongs to the underlying principles of the solar system or the inductions of modern biological evolution. At the present day, even in scientific circles, there are probably more doubtful affirmations or denials, made with the full assurance which properly belongs to knowledge, than there are proved truths, whether of fact or law or ultimate principles.

On the other hand, there are temperamental doubters, minds that are forever hesitating over the positions which they shall take, not only with reference to judgments still accompanied by a notable measure of legitimate distrust, but even concerning the well-nigh universally accepted conclusions of expert students and the popular opinion. And what is further significant with these habitual doubters is the fact that not infrequently

they divide themselves into sub-classes in dependence, not so much upon the amount of evidence looking toward the objective truthfulness of any particular theory or opinion, as upon the nature of the subject with which the theory or opinion has to do. There are men who are so credulous with regard to some cherished doctrine of a theological character, or scheme for moral and social reform, that the plainest evidence of a scientific character, when it bears in the direction of correcting their credulity, has little influence upon the tenacity and assurance of their faith. But perhaps there are as many "scientists" who reject evidence for those truths of morals and religion which have been established by the highest products of the spiritual evolution of the race, that is far in excess of any evidence they can possibly present for their own most cherished views as to the facts and the course of the world's physical and biological evolution. For such minds it is much easier to believe that the confused and internally contradictory conception of Ether corresponds to the substantial Reality and the creative Force, which the human intellect demands to satisfy its need for a solid Ground in which to place its account of all particular things and all events, than to believe in an immanent and ceaselessly creative Spirit, a Personal Absolute, whom "faith calls God."

All these kinds of temperament may be so habitually indulged, or so unfortunately worked

upon by their environment, as to result in extremes of abnormal intellectual development, or even of insanity. Our asylums are full of the victims of such abnormal development. Among their inmates are those who are holding the wildest delusions, the most absurd and grotesque hallucinations, with all the tenacity and assurance which the human mind can give to the most approved knowledge-judgments. That some of their bodily organism has turned to glass or is full of demoniac spirits, that they are some great one risen from the dead or descended from heaven, that they are habitually in communion with distant or departed friends, that they are kings or emperors or gods in the flesh, — all these things they know and know that they know, without a shadow of doubt or the slightest possibility of successful contradiction. The madder they get, the surer they are. The only way to restore their mental sanity and make them again capable of genuine knowledge in these particular judgments, involves the destruction of their diseased confidence in the validity of the same judgments.

But side by side with these unfortunates, in the next cell or the adjoining corridor, are other victims of abnormal or even hopelessly insane doubt. In its simplest form this abnormal condition is described (see Ribot, The Psychology of the Emotions, p. 375) as "a chronic disease of the mind characterized by constant uneasiness."

Some cases "do not pass beyond the region of every day trivialities, as the man who will return twenty times to see whether he has really locked his door." To others, who have the diseased mind of the doubter in its graver forms, there has come "the complete loss of all notion and feeling of reality." By no means all the most melancholy and hopeless cases are confined to doubters on such subjects as those about which healthy minds would hesitate to claim the possibility of obtaining the full assurance of the tested "knowledge-judgment"; such as one's own salvation, or the recovery from a severe illness, when promised by a court of attending physicians. As certain classes instanced above, both of abnormal assurance and of abnormal doubt, plainly show, the presence or absence of rational conviction concerns truths for the establishment of which the observer ordinarily appeals to the individual himself as the source of most accurate knowledge.

But temperamental tendencies to over-confidence or to excessive caution, and the influence of prejudice on the side of affirmation or denial, are by no means confined to those whom the popular opinion regards as too ready for "cocksureness" or too prone persistently to object; much less to those whom the authorities have selected to fill our insane asylums. All of us are temperamentally inclined either to over-confidence or to excessive caution, and to distribute both our faiths and our doubts without pausing to regard

the weight of evidence. The born "scientist" tends to adopt one class of unverified faiths and unreasonable doubts; the man of moral and religious insights, another class; the man of artistic impulses, still another; and among all classes of knowers, the so-called "practical man" probably most needs to be constantly on guard against the influence of his temperamental handicap. Common-sense is indispensable for certain fundamental kinds of knowledge. It is a valuable associate judge or corroborative witness in the court that tries out the contesting claims of the disputants over various kinds of knowledge. But when it demands to see the invisible, to handle the intangible, to number and weigh the spiritual elements of human existence, and to discover the final purposes and last principles of Reality, without speculative imagination and range of intellect, it makes impossible for the mind it is guiding, the truths of supreme import and highest value. In recognizing or thinking one's way into the spiritual realities of science, as well as of art, morals, and religion, the man of mere common-sense is of all others most imbecile and untrustworthy. Thus it not infrequently happens that those who take the "practical" view of things know least about the truth of things; and those who boast most of "common" sense have little of any other kind of sense.

In close dependence upon the truth which we have just been considering stands another which

should determine the conduct of every sincere inquirer after his own solution of the problem, What is it for *me* to know? and so, What can *I* know? This truth concerns the good and the evil effects of habit in this matter. The formation of habit introduces the scope of the individual will into the problem, How to be reasonably and fitly and, so to say, decently sure of what we know? For although our habits are largely made for us by inheritance and environment, they are to some appreciable and important extent, made by us for ourselves. By deliberate reflection we may supplement and intensify the lessons which unreflected experience is constantly impressing upon us. We may "rub in" the ointment that soothes or makes smart the wounds we have received to our pride of knowledge, through excess either of eagerness or of caution, of confidence or of doubt. He would be a rare man indeed, a human mind gifted with almost divine insight and wisdom, who did not discover many sad mistakes made by being too sure of the facts, or of one's private interpretation of them, and of many glorious opportunities lost through hesitation to act that was caused by what turned out to be unreasonable doubt. Hence the necessity for cultivation of habits that are aimed at the attainment of some ideal standard for the confidence with which we endow our various knowledge-judgments. In this way we may cease habitually to be so much more confident than

we ought to be about this matter of thought, and so much more sceptical than we are warranted in being about that other matter of thought. It is such culture that begets the reasonable mind; and this is the mind which habitually tries so to adjust the amount and direction of its assurance as to make conviction, or "subjective sufficiency," correspond to certainty, or "objective sufficiency."

No amount of culture in the preparation of material, or in the suspension of judgment, or in the weighing of evidence, can ever do away with the peculiarities of the individual knower, or abrogate the right of private judgment. Each individual will retain his own peculiar outfit of knowing faculty, will remain more easy to convince on some matters than on others, and will distribute his confidences and his doubts in his own way. Doubtless also, each one will forever be showing tendencies to unsoundness of judgment in one direction or another. We are fortunate, if it is not in more than one direction. In the large world-adjustment, with its countless variety of species and no two individuals of any of the higher species, perhaps no two germinal cells, precisely alike, this variety of judgment-forming temperaments and habits, may be in the favor of a higher development of knowledge for the entire race as made up of these individuals. We believe it to be so. It is a benevolent divine dispensation, not only that all men do not think

alike, but also that all men do not know the same partial truths or look at things in the same one-sided way. "Cock-sure" fellows and doubting Thomases both make their contributions to the growth of human knowledge, albeit in different ways. But there is a profounder truth than this, which has risen near enough the surface for us to grasp and recognize it at the present time. There are by inheritance, environment and habit, — and I for one do not hesitate to believe, by Divine gift of insight and inspiration, — members of the race especially prepared to announce with assured conviction truths that are only dimly apprehended and doubtfully held by the rest of us. In art, morals, and religion, these men are revealers of reality, long before the lagging and doubting experience of the race has justified their assurance. They are the seers who have the clear vision and the proofs by thoughtful reflection, of knowledge-judgments that establish themselves in the minds of the multitude only after years or centuries of racial experience has proved them true. And what is true of art, morals and religion, is true of the physical and psychological sciences as well. The accumulations of knowledge for the race, with the confidence which is generally reposed in its trustworthiness as representative of actual facts and events and of real laws and principles, is justifiably based only on the assurance of those few whose insights and thoughts and inductions from

guarded observations and experiments have guaranteed this knowledge. In all fields of human endeavor the being sure of what we know is with most of us a second-hand and borrowed affair. It is not for this reason, however, any the less a logically justifiable affair.

The individuality of this emotional element in all human knowledge, while it is more conspicuous and more influential upon the growth of knowledge among mankind at large, in a comparatively few cases, is no less essential and in a measure justifiable in the case of the inconspicuous multitude. The individual's experience is not as yet knowledge; but it is the only source of his knowledge, — if under the term we include not only what the individual observes and thinks and intuits "for himself," but also what he incorporates into his own experience from the observations, thoughts, and intuitions of others. This act of "incorporation" cannot be effective, cannot result in a system of knowledge-judgments, unless it partakes of the peculiarities of the individual in respect of the emotional element. All the body of each one's knowledge, to its toes and its finger-tips, must be made alive with this personal element, the feeling or sentiment of conviction.

But the important question still presses, and all the more heavily on account of the concessions which have been forced from us in view of the infinite variety in the constitution and habits

of individual knowers: How shall each individual, and how shall the race of men, secure the passage from conviction to certainty, from "subjective sufficiency" to "objective sufficiency?" How shall assurance be made the guaranty of knowledge? Here we are, of course, again referred to the nature of logical proof and to the accepted laws of evidence. And yet we have seen that the same proof and the same evidence have very different effects upon different minds. Each man's logic is liable to be swayed or dominated by the very feeling on which he relies to secure its purity. It is quite as often in spite of arguments as in deference to arguments that some men are perfectly sure upon matters about which others are perpetually and hopelessly in doubt. Why can not the minds of all men come to some agreement, at least upon the great majority of important truths; since they are constituted essentially alike? Why does not human judgment upon what is really so, carry always more nearly the same measure of assurance and also of doubt?

Before we attempt the very partial and not quite clear answer which can be given to this important question we must briefly examine two distinctions which, when made in the customary hard didactic form, inevitably obscure the whole subject. Indeed, this problem of knowledge, like every other scientific or philosophical problem, has suffered lamentably from the attempt to draw

thick and rigid lines where life and reality have left all in a muss of mingled chiaro-oscuro. For life and reality are in general, not an etching on steel but a water-color made by Japanese art to represent a Japanese atmosphere.

These two distinctions are the distinction between subjective conviction and objective certainty, and the distinction between believing and knowing. It is not that similar distinctions are not justifiable and valuable; they are both. But for the last one hundred years they have been drawn with too heavy a hand and in terms of too great precision. The chief reasons for this are to be found in excessive deference to the "pedagogic primness" of Kant and to the "cocksureness" of modern science. A very healthy reaction, itself, however, tending to the other extreme, is now taking place.

There is no absolutely sure passage, either for the individual or for the race, from subjective conviction to objective certainty. Conviction will always vary in its intensity and steadiness, according to the nature and mental habits of the subject, whose conviction it is, and according to the subject about which the conviction is exercised. On the other hand, the certainty which is attached, or which can reasonably be attached, to any form of knowledge, or to any particular knowledge-judgment, is no fixed affair. The more earnest and thorough is our endeavor to place our assurance of knowledge on grounds

which will render it sufficient or compulsory for every knower, who has not had our experience or does not and can not take our points of view, the more convinced do we become of the elements of irremovable doubt that lurk in all claims to an absolute objective certainty. All this and more will become somewhat clearer, after we have in the next chapter examined the degrees and limits of knowledge. For there are degrees, and there are limits, to all human knowledge. This qualification of degrees attaches itself inseparably to every kind and to every act of knowing, whoever the knower may be.

Somewhat similar criticism must be made with respect to the Kantian distinction between believing and knowing. As we have already seen, this great critic of the human reason and its various so-called faculties and spheres of activity, distinguished believing from knowing in a categorical way. His principle of division was just this "certainty" which was somehow supposed to be added to believing in order to convert it into knowing. But the distinction, when made in so rough and bald a manner, is psychologically false. Indeed, there are obvious signs that Kant wrote the short chapter of the Critique of Pure Reason in which he makes the distinction, in a, for him, unusually thoughtless and careless way. The distinction itself he virtually himself abrogates in his other great treatise, that on the Practical Reason. But Pure Reason does not effect knowl-

edge without believing; and the faiths of the so-called Practical Reason are productive of many of the highest and surest and most logically indorsed among our knowledge-judgments. In saying this we are not referring to the commonplace truth that all knowledge either rests upon, or is involved in, the validity of certain so-called instinctive beliefs. Nor are we taking the position of those theologians who would rest upon faith, their acceptance, as items of assured knowledge, of certain doctrines of Scripture or dogmas of the Church. We mean, the rather, that the assurance which guarantees the reality of the objects and truths in which we *believe*, as we are wont to say, is not essentially different in quality, or in origin, or in its value as evidence, from the assurance which guarantees the reality of the objects and truths about which we claim to *know*. Indeed, whenever the assurance of belief attains a certain degree of intensity and a quality of steadiness of character, we speak of it as knowledge. On the other hand, when assurance begins to show dim, or to withdraw its support from our judgment, we begin to question whether what we thought knowledge is anything more certain than a doubtful belief. But we are just as ready to say that we do not believe in that way any longer.

The real differences between our beliefs and our knowledge are chiefly these two: Our beliefs are more largely based upon experiences of emotion

and sentiment in a predominating way; and the most intense and tenacious of them are attached to judgments about matters that have some kind of ideal value. Many of these beliefs, however, are not more difficult to establish on valid grounds of experience, nor are the processes of thought by which we argue our way to their truthfulness more circuitous or illogical, than are what we call the proofs of the great majority of our knowledge-judgments. Reasonable proofs of the faiths that concern the ultimately true, the good, and the beautiful, are not necessarily more deficient in cogency or less satisfying to our demand for "objective sufficiency" than are the more general conceptions and laws of the positive sciences. Indeed, these very conceptions and laws are themselves largely dependent for their certainty on fundamental beliefs, which science shares with art, morality, and religion. Thus the thoughtful student of nature, who becomes *convicted* with a quite complete assurance concerning its order, harmony, obedience to law, and conformity to various human ideals, is no more and no less reasonable, than the student of morals or religion, who trusts similar convictions for his conclusions as to the reality of the ethical conception of society or the personal ideal of religious faith and worship.

And now the question which is of the highest theoretical significance and of the greatest practical importance recurs in yet more complicated

form. The problem of one's private right and personal ability to claim knowledge on any particular subject of knowledge can not be solved by one's intensity and obstinacy in the assurance of knowledge. What can I know? is a question for every man which can not be settled by a bare appeal to the feeling or sentiment of knowledge. *A* can not pat himself on the back and say to *B:* "I surely know this, because I feel sure about it." But then *B* cannot retort to *A:* "You certainly do not know it, because I do not feel sure about it." It is even conceivable that one man alone may know what no one else knows. On the other hand, on some subjects the knowledge of a very few is the only safe guide to the assurance of knowledge for the entire race. In these and similar undoubted facts of human universal experience we must find our way, if such way is to be found at all, to the path that leads from subjective conviction to objective reality.

The best general answer to the inquiry now perplexing our minds may be given in some such words as these: In order to gain as much as is possible of objective certainty, we must make our beliefs and our knowledge-judgments as *reasonable* as possible. The art of making them "reasonable" has already been partially disclosed. It consists in cultivating habits of prompt and accurate recognition and of the disposition and skill in ratiocination, to think things through to the end of a fuller understanding of them.

Availing one's self of all happy intuitions and suggestions, whether they arise spontaneously in one's own mind or come to it from others; observing carefully and pondering thoughtfully the facts of nature and of human life; cherishing the generous heart and the hearty interest in all manner of truths, with the justifiable persuasion that they are, if not closely interlocked, at least distantly related; and banishing as far as one can all misleading prejudice and deterrent jealousies, — so shall one be saved from living chiefly in a world of illicit though pleasing illusions or of weakening agnosticism and depressing doubts.

Making one's beliefs and knowledges reasonable, therefore, undoubtedly involves an acquaintance and use of the so-called logical processes, the kind and degree of which are dependent on the presence or absence of a *quasi-scientific training*. But to think logically about the experiences which are forced upon us by the realities and relations, whether of our daily life or of the phenomena with which the positive sciences deal, is a very different thing from trying to apply to them the formulas of pure logic or the calculations of pure mathematics. The real world is not constructed after the strictest pattern of either the Euclidean or the modern geometry, or of the logic of Aristotle or the dialectic of Hegel. But it is a world which we know the more thoroughly and to whose regular behavior or seeming caprices and contradictions we adapt ourselves more safely,

the more thoroughly reasonable we make our beliefs and our knowledge-judgments.

I have said that a "quasi-scientific training" is indispensable for the best success in making the transition from subjective conviction to objective certainty, or — better said — in rendering reasonable the various degrees of assurance attached to our judgments, whether we call them believing or knowing. As a matter of fact, each one of the positive sciences has worked out for itself a somewhat special way of rendering its assurance of knowledge more reasonable, — a technique of examination, a select method of proof. In so far as any individual knows and can himself use, or can appreciate the use by others, of this technique and this method, he is the better equipped for the work of rationalizing his own convictions. But if, in any branch of human knowledge, any individual knower neither does know nor cares to know, or perhaps is hopelessly unfitted to know, how to get or to approximate the truth of reality, then he must either confess ignorance and surrender all claim to a reasonable conviction, or must take his judgments with their accompanying measure of conviction, solely on authority. And, indeed, it is on the basis of authority that the judgments of the multitude must rest in the great majority of all the truths proclaimed by the positive sciences.

In general, however, every man, no matter how ignorant of the ever-changing conclusions

as respects the details of fact and the explanatory causes and ultimate principles of the modern sciences, may follow with a fair measure of cheer and hopefulness the task of rendering his convictions as to what is true and what not true, more and more reasonable. For him as an individual, as for all the positive sciences and for all the world at large, the safe rule and valid measure and desirable end of reasoning is essentially the same. It is *the production of harmony in the system of experiences*. If the new fact, or the recently observed event, or the just discovered or conjectured cause, does not fit in with the rest of our already systematized experiences, we hesitate about receiving it, we withhold from it for the time being the assurance which it assumes to claim. But if, accepted as fact it harmonizes with, or accepted as cause it better explains, the system of our experiences as already constituted, then we greet it with a certain degree of satisfaction, which in not a few cases amounts to a positive joy. But if the fact refuses to harmonize, and yet stoutly persists in asserting itself as fact, it must bide its time. Dissonances are not reduced to harmony by banging the piano.

That the feeling or sentiment of truth is normally a pleasant feeling, has long been recognized by psychologists. But that doubt is normally a feeling of uneasiness, a sentiment which tends to link itself with painful emotions, has been held to be equally obvious. Those, therefore, who

seem to rejoice in doubt and unbelief are quite habitually compelled to comfort themselves with the pleasant feelings which flow from the consciousness of doing one's duty and standing by the truth at all cost; or with the smug satisfaction of a belief in their intellectual superiority to the common run of mankind.

He, then, who wishes to have the assurance of knowledge only when it is reasonable will be untiringly striving for nearer and nearer approaches to a harmony in the system of his experience and of the beliefs and judgments to which these experiences have already led him. In the interests of harmonizing he will not sophisticate or refuse the facts of reality, however brought to his attention; but in the interests of harmony he will rationalize these facts to the end that his distribution of assurance and of doubt among the complex of beliefs and knowledge-judgments which constitute the "making-up" of his "mind" may become more and more reasonable.

The yet more exacting test of the objective certainty of the beliefs and knowledges of mankind, and of every individual man, depends upon the way that these beliefs and judgments harmonize with the experience of the race. Of these beliefs and these knowledges every individual has some share. It comes to him by inheritance, by tradition, by the teachings of the learned and the wise, by the discoveries of the sciences and the progress of manufactures, of commerce, and

the arts, in dependence on these discoveries. But humanity knows more, and more surely, than any individual knows. Not less but more valid, therefore, is the knowledge which every individual renders more reasonable according to the fulness and depth of his share in the scientific achievements, practical successes, moral convictions and religious beliefs of the race. These convictions and beliefs must themselves be tested by their reasonableness. And with them, too, reasonableness will depend for the degree of objective certainty to which it is entitled, upon the way in which the judgments to which the convictions and beliefs are attached, harmonize with the ever-growing system of the intellectual and social evolution of the race. Harmony with this system is the ultimate test, so far as ultimate test can be had, which the reasonings of the human race, on a basis of facts of racial experience, is striving forward toward but never finding quite securely reached. The assumption that the reality which the race is bound to believe in, and is ever striving more *sufficiently* to know, is itself a rational system, underlies all human knowledge and all growth in knowledge. It is an assumption which demands further recognition in more than one other connection.

There are some practical considerations which have a claim to our attention as flowing out of the views to which we seem compelled by raising the inquiry, "How to be sure of what we know."

First, and perhaps most important of all, is this. There are certain very valuable beliefs, chiefly in the domains of morals and religion, against the truthfulness of which men who do not have the beliefs can not argue on terms of equality with men who have them. The failure of Haeckel to believe in a personal God and Redeemer is no counter argument for a mind with the experiences of the Apostle Paul and of millions of others of the human race. There is truth also in the bold, irreverent witticism of Labouchere: "Mere denial of the existence of God does not entitle a man's opinion to be taken without scrutiny on matters of greater importance." Nor does the scoffing of a Voltaire at all manifestations of the supernatural reasonably serve to diminish the confidence of a Jerry McAuley in the belief that spiritual forces not his own, or emanating from other mortals, have effected a sudden and profound change in the springs of his entire being. On the other hand, the unwitting or more deliberate admissions of both these agnostics may confirm, rather than controvert, those processes of reasoning, or so-called proofs, for the being of God as Ethical Spirit, which have been slowly evolving themselves from the religious experience of mankind. Just so Mr. Spencer, after agreeing with Dean Mansel in the judgment that the abstract "conception of absolute and infinite, from whatever side we view it, appears compassed with contradictions," goes on to appeal

to his own conception of the "Unknown Cause" for a moral justification on the ground of the sincerity of his own religious belief. Meanwhile the progress of rational thinking, in its effort to ground the most precious and persistent of man's moral and religious beliefs in the facts of the physical and psychological sciences, is eliminating many of the contradictions, and supplying some of the deficiencies, in the current conceptions touching Nature and God as the Supernatural. And every individual, according to his ability to share in this progress may make the assurance of his faith and hope more distinctly reasonable, more reasonably sure.

One other inexpressible benefit flows from the discipline of subjecting our convictions to the treatment of reason with a view to gain for them an increased certainty. This discipline leaves enough of *sufficiently* certain belief and knowledge for us to live by, in most practical matters; but it also cultivates a spirit of repose in the middle ground between the mirage-breeding mists of over-assurance and the distressing bogs of hopeless doubt. It begets the peace of being satisfied, not surely to know, but to accept as sound knowledge-judgments a host of conclusions that can claim only a higher or lower degree of probability. There are many comforts and other advantages in being willing *not* to be sure. In many matters, even those of greatest import, the wise man walks in the middle of the road. He is neither agnostic nor "cock-sure."

CHAPTER V

DEGREES AND LIMITS OF KNOWLEDGE

THAT all those judgments which constitute the body of human knowledge, whether of the individual or of the race, are not held with an equal degree of assurance or considered to be equally securely placed upon grounds of proof, has already been made sufficiently clear. And yet our habit, both of speaking and of thinking, is wont to be somewhat disturbed by the declaration that there are degrees in all human knowledge. For do we not hear people repeating the time-worn phrases: "If a thing is so it *is* so"; and "If I do know, and not merely think or guess, it to be so, than I *know* it to be so." About the commonest items of knowledge, we hear men offering to bet all they own, or to stake their heads or their lives, — not considering that every man is momently staking his life in the confidence of judgments which no man can hold with other than a lower or higher degree of probability.

The doctrine of the degrees of knowledge, as such, will be better understood, if we can suggest some thermometer, as it were, which will, at least roughly, measure these degrees. Such an even

approximately reliable standard of measurement can not be found in the amount of heat which belongs to our subjective convictions. It is much better supplied — to change the metaphor — by the harmonies of the chords which resound in the mind when the new note is struck within its environment.

Now all measurements imply a standard of a graded nature, a scale of values, along which the objects to be measured may be ranged, and also, an attempt to get as near as possible to something which shall be "absolute," or afflicted only with the smallest amount of changes. By this relatively fixed standard all things which belong to the same class may have their positions fixed as relative to one another.

Two different indicators for taking the degrees of verity attached to our judgments have been somewhat widely accepted theoretically, and have been widely used in the practice of making the necessary distinctions. A large field of human knowledge has its claim to certainty constantly measured and re-measured by the satisfaction it gives to the inquiring intellect in the form of its *scientific* character. The objects and occurrences in this field may be weighed and measured in scales and by tape-lines, or micrometrically. They can be handled and carried on to highly probable conclusions by rough calculations or by the higher mathematics. They can be observed with microscope, telescope, or as in

the crucible, or under the action of some form of re-agents. The truth acquired in this way is called "scientific"; and much well-founded praise is bestowed upon the successful efforts of a growing number of the world's best intellects that are devoted to giving to this body of knowledge the highest degree of objective certainty. Along their scale of degrees the positive sciences are constantly making rival claims for the upper places in its register. The "purer" the science — that is, the more it can rely on mathematics or on an untroubled course of demonstrative reasoning, — the higher it stands in the scale. But, unfortunately, the purer any science remains, the less of verifiable knowledge it has to give us as to the real constitution and actual causal connections of the world of our experience. For this kind of knowledge, with the objective certainty which we desire for it, we have to go to the so-called applied sciences. And here we enter at once the arena of contested claims. For example: a former colleague of mine, a professor of physics, was accustomed to argue with no little heat that he taught the only real *science* in the college curriculum; and when I once ventured to ask the leading authority in the country on this subject, whether he considered meteorology a science, he responded rather tartly and with snapping eyes: "It is just as much of a science as geology is." The retort was plainly significant of many a heated argument with his University colleague whose

specialty was the latter subject. Without entering into this or any similar debate, and without yielding to the temptation to invent any new classification of the "positive" sciences according to some valid standard of their positiveness, we will say that all human knowledge may be ranked as higher or lower in the degree of its valid claims to certainty, according to its scientific character.

The value of this standard and the validity of its application are increased when we consider that in all essentials there is no difference between what we call science and much of the most ordinary so-called practical knowledge. The soil of all the sciences is in the things of which the average man knows, and is obliged to know somewhat, in order that he may secure by his own action any of the goods, or by his own action escape any of the evils, of his daily life. Astronomy sprang out of the observations of the common sailor or of the half-credulous, half keen-witted astrologer. Chemistry had for its foster-mother the "foolings" of innumerable cranks, or the suspicions of the ignorant concerning the invisible elements of visible things. Modern medicine owes its most triumphant use of cures obtained from the world of plants and minerals to the experiments — resulting as often in death or having no result as effecting cures — of quacks and priests and old-women, who were shrewd to take account of the symptoms and of the hopes and

fears, the suggestibility, of the vulgar crowd. Not infrequently, modern science is obliged to turn about and accept, at least for re-examination, the conclusions of the common and unscientific experience, which it had rejected as unworthy of further credence or testing. And some of the so-called sciences — notably, for example, that mixture of somewhat arbitrary selections from other kindred branches of knowledge or conjecture, with not a few unverifiable hypotheses of its own, known as sociology — are less able to explain the past or predict the future than many a wise observer of phenomena who would never think of claiming any measure of scientific attainments. A delegate to the World's Congress of Naturalists, who had from boyhood been brought up in close companionship with the typical primitive man, the savage native of Australia, once said to the author: "I take off my hat every time to the native when it is a question of what is to be known about the flora and the fauna of his own environment."

In saying such things as these it is not the intention to depreciate modern science, its methods of precision or the certainty of its conclusions. We are simply reminding ourselves that, with respect to certain things in our common human experience, there are no sharp limits between what is called science and ordinary knowledge. In both, the degree of certainty is dependent upon the satisfaction which the intellect receives from a more

clear and conclusive explanation of the phenomena, when the various appropriate tests are applied, and from the improved results gained by the growth of knowledge in the use of physical things. It is in all this field of knowledge that the theory of pragmatism is most successful when it relies upon illustrative material. The truest kind of hoe, the one most scientifically constructed, is the hoe that does the business. But if the gardener has found out by his own limited experiments that this particular kind of a hoe does in fact work the best of any that he has tried, the science of physics — physics of the handle and the blade, physics of the soil, and psycho-physics of the nervo-muscular organism — may be able to explain why it is so. Science may result in giving him a better hoe; or it may result in substituting the steam-plow for the hoe. But if the man with the hoe has himself observed and reflected upon the why of his experience, he has started on the path of scientific knowledge. It is the same path all the way to the steam-plow and on into the explanation of the forces which work in and through the most complicated mechanism.

It is the ever shifting but increasingly more sure standards of the intellect in its search for explanation and in its ambition to improve the conditions of the physical life, that determine the degrees which must be acclaimed to this class of knowledge-judgments. A more extensive and

accurate acquaintance with the qualities of things, with their causal and other relations as explanatory of events; a better compacted and more harmonious system of formulas embodying the results of the widening experience of mankind; and all this leading to a more effective use of the means of improved physical existence, — such are the characteristics of that body of knowledge which has its degrees determined and raised to higher and higher power as measured by one kind of standard.

But there is another kind of knowledge the degrees of which must be measured by another kind of standard. This knowledge is given in the form of judgments that affirm or deny the realities which correspond to man's ideals of the true, the beautiful, and the good. The judgments themselves, as has already been said, have their roots in certain very persistent and very profound but practically universal emotions and sentiments. The particular, concrete terms of the judgments in which this form of knowledge expresses itself are in a constant process of evolution. In this important respect they share the nature of all human knowledge. It is a growth for the race as well as for the individual. The goal towards which this progress of knowledge goes forward, often with dim or almost completely blind eyes, and always as "seeing through a glass darkly," is the realization of certain spiritual ideals. The standard which measures

the degrees of this sort of knowledge is determined by the values of these ideals. The *spiritual* conceptions of science (I do not hesitate to use the words in this connection), the artistic, moral and religious conceptions and judgments of humanity, are the field over the area of which this sort of measurement prevails. When it is a question whether the world of physical objects is a chance resultant of unconscious Power, an ill-consorted jumble of antagonistic existences and contending forces, a "pluralistic universe," or an orderly and sublimely beautiful and rational whole, a Cosmos, a Divine evolution, the argument is compelled to take a different turn from that which is satisfactory in discussing some petty detail of some one of the positive sciences. Emotions that favor judgments appealing to man's respectful love of the sublime, of the orderly and the beautiful, refuse to be denied their weighty influences in the controversy. The standard by which the degree of knowledge to be assigned to any one of the several theories of the art of world-building which has actually been in operation through countless myriads of years, is no longer one of a purely intellectual and practical sort. The demands of ideals that have value, and that control our value-judgments, now make themselves powerfully felt. No theory of evolution can ever repose on strictly scientific grounds. Every such theory is a sort of conglomerate Ideal.

Even more true and sure is the experience of

mankind in the progressive, historical formation of its moral consciousness and its prevalent judgments and practices concerning what it is more or less right, more or less wrong, to think and to do. At no time in man's history has the morally right and wrong been fixed by positive science or by statutory enactment. Men have always believed, and will always continue to believe, that the true standard for adjusting distances between the actual and the ideal, in matters of public and private righteousness, cannot be made objectively certain on purely scientific grounds. Above all is this truth applicable in the attempt to assign degrees of knowledge to the judgments which men hold touching the verities of religion. To bring the so-called proof for the being of God into terms satisfactory to the exact methods of the positive sciences has always failed. It will always continue to fail. For this is the realm within which the values of the ideals to which the human spirit most tenaciously clings have their greatest and most legitimate influence.

This difference in standards by which the different degrees of two kinds of knowledge are rated produces some curious and most impressive results. Among the most beneficial of these results is the unceasing attempt at harmonizing the interpretation of all man's experience as regarded from these two points of view and as subjected to these two standards of measurement. This attempt follows naturally from the

very nature of knowledge. In the most positive of the sciences, the influence of feeling and of ideals is not altogether absent; in the most spiritual of the experiences of art, morals, or religion, the work of the intellect cannot be excluded. The highest and most obscure of the artistic, ethical and religious emotions, may be made subjects of analysis and bases for argument as to correlated realities. And so the reconciliation of science and religion, of art and physical and psycho-physical facts, of the demands of cultivated and inviolate conscience with existing custom and legality, is a most important part of the culture and growth of knowledge, in the individual and in the race.

Another result of this difference in standards is of a more painful sort. Not a few men — perhaps in the present day, a majority — either try to content themselves with holding diverse or contradictory judgments as estimated by these two standards; or else they abandon all attempt at reconciliation and hold exclusively either to the so-called scientific conception of the World or to that which builds upon the truthfulness of the value-judgments. They take the exclusively scientific, or the exclusively ethico-religious view of the world. Thus at one time, the late Mr. Romanes appeared to himself to have lost both knowledge and faith as to the realities of religion, out of his trusted experiences. Yet he always expressed his sincere regret at his inability to secure either faith or knowledge about subjects

having such a high intrinsic value. But it was just the experience of their value in which he ought to have found the assurance of faith growing into knowledge. On the other side, what vast numbers of theologians and biblical scholars have always been on hand to resist every attempt at a scientific construction of the history of creation or at an explanation of some group of natural phenomena, because it did not correspond with their preconceived ideal of God and of his relations to the world of things and men! The only fully satisfying knowledge of particular things and events, or of the Universe at large, includes both standards. True knowledge advances through the reconciliation of facts with ideals.

But is there no absolute standard for all kinds and every individual act of knowledge? If we could find such a standard, is it not conceivable that we might apply it and so infallibly and once for all fix the degree to be assigned to every claimant to the title of true judgment? Or, must we not the rather say that the word "knowledge" should be reserved for only such judgments as come up to this absolute standard? All others might then be called belief, opinion, or at best, scientific hypothesis or theory.

The attempt to find an absolute and indisputable standard for knowledge has occupied the minds of philosophers for many centuries; and various schemes and maxims have thereby been devised. But the trouble is that as they approxi-

mate the truth, they become more and more abstract; and as they become more abstract, they become more and more practically useless.

No better formula for absolute knowledge has ever been devised than that employed by him who has been called "the father of modern philosophy," the thinker and soldier, René Descartes. This formula, which was to serve as an absolute standard, he expressed in the Latin words: "Cogito, ergo sum" (*Je pense, donc je suis;* I think, therefore I am). It was soon pointed out that as an argument, the formula was illogical; because it involved in the premises all that was in the conclusion. But although Descartes used the logical word *ergo* to connect the conclusion with the premise, he never intended to present this absolute standard in the form of an argument. Of course, any proposition which admits of argument is not absolute. What Descartes meant was this: In all self-conscious thinking we are face-to-face, in an absolutely indubitable way, with our own existence. The wits of the day and of the days since have made fun of this formula. Why not say: "I walk, therefore I am?" Just as well, if only I am aware of myself as what appears to me, even in a dream, to be in a state of walking. Who would hesitate to say that without being alive, I cannot even dream of myself as walking? The absolute truth is that I cannot do any thing, perform any mental act self-consciously, without involving the indubi-

table face-to-face knowledge of being then-and-there existent. To say *dubito* or *ignoro* (I doubt or I do not know) is every whit as valid an assertion of this fact, which for me admits of no possibility of doubt, as to say *cogito*. Indeed, for the young law-student to whom reference was made in another chapter, "I do not know" was about himself at the time the only truthful proposition.

But plainly this formula is neither full of truths that can be developed into a system possessing the same certainty which belongs of full right to it; nor is it adapted to serve us a sort of universally applicable test for the degree of verity attaching itself to other judgments. Children do not grow in knowledge by assuring themselves of the Cartesian formula. Even in our psychological laboratories we can make little or no use of this abstract "cogito" in advancing the knowledge of the human mind. The formula does not even enable us to distinguish between the most undoubted verities of our waking life and the wildest of dreams. Perhaps Tartini did really dream out his "Devil's Sonata," and Voltaire, one version of his song to Henriadne. Dannecker's colossal "Christus" may have first appeared to him as a dream-image. All of these artists may have been vividly conscious of their dream-objects; they may even have been conscious of themselves as dreamers. Thus the dreamlike experience, when analyzed, may have

had concealed within it all the quality of absolute certainty demanded by the celebrated maxim of Descartes. But the reality of the dream-objects would share, even less than the similar objects of their waking experience, in the quality of being placed beyond the possibility of doubt. And so it happened with our philosopher that when he attempted to pass, with a demonstration compelling unqualified consent, from the reality of his own then-and-there self-conscious existence to the reality of the world of things and the reality of God, his argument failed to attain anything like universal acceptance. Indeed, as a demonstration it is now universally rejected.

We come back, therefore, to the only position in which the knower can contemplate his destiny with the peace of mind that comes from a mingling of docility and enterprise. We have raised for each individual the question, What can I know? And having soon discovered that no man can put absolute confidence in his convictions, or in the intensity of his sentiment of truth, to guarantee the objective certainty of his knowledge, we have raised the further question as to how this end may be approximately attained with varying degrees of reasonableness. Our answer has been of the following somewhat complicated sort. If you wish to know as surely as possible what it especially behooves you to know, you must cultivate your intellectual faculty, your power to think your way into and through

things, — their origins, their qualities, their relations, their causes, the laws of their behavior, and their uses. You must use these same intellectual powers, to learn about things from others who have more scientific training and more experience warranting claims to scientific knowledge. But you are not a being of pure intellect, a mere calculating machine, summing up the results of a vast amount of refined instrumentation. You have experiences of longing, aspiration, spiritual satisfaction or disappointment, in the dim or fuller view of certain ideals. These experiences give rise to certain value-judgments, which it is customary to call beliefs rather than knowledge. But you cannot afford to sacrifice or depreciate these value-judgments, or permanently refuse to allow them a place in your rationalized system of knowledge. You must cling to them, purify, elevate and deepen them. Above all must you honestly and steadfastly endeavor to harmonize your total experience in your personal attitude of intellect, feeling, and will, toward a World of physical and spiritual realities. Thus you will become *rational*, which is by no means the same thing as having an intellect sharpened by too exclusive devotion to some one or more of the positive sciences.

In the doctrine of the Degrees of human knowledge, it is plainly implied that there are Limits to all human knowledge. And the path of the progress of both science and philosophy is strewn

with the attempts arbitrarily to fix these limits. Almost oftener than not these limits have been set so as virtually to shut out the human mind from all knowledge; if indeed by *knowledge* we understand any mental attitude which is the trustworthy correlate of the actual and the real. In this view knowledge does not correspond to reality as having any existence independent of the act of knowing itself.

Among such attempts to fix in a demonstrative way the limits of knowledge, the following are a few of the more prominent. There is first of all — as estimated by its influence on modern thinking — the limits set by the critical philosophy of Kant. He set limits and fenced them in forever by an irremovable and insurmountable wall of a distinction. This distinction was between phenomena and noumena or things-in-themselves. Human knowledge was, and from the nature of the human mind could only be, *of* phenomena; the real thing, the thing-in-itself, lay beyond the horizon of human vision. We are indeed obliged to assume *that* it is; but *what* it is, in general or any single instance, we can never know. Thus the domain of science is for Kant "an island and enclosed by nature itself within limits that can never be changed. It is the country of truth (a very attractive name) but surrounded by the wide and stormy ocean, the true home of illusion, where many a fog bank and ice that soon melts away tempt us to believe in new lands,

while constantly deceiving the adventurous mariner with vain hopes, and involving him in adventures which he can never leave off, and yet can never bring to an end." The island of Kant cannot grow out into the ocean; the ocean can never clear itself of fog and ice, and no mariner can devise chart or compass which may enable him to diminish by so much as a square yard its dreary waste. It is there; but not as the bearer on its bosom of land that may be discovered in the future; it is the infinite and absolutely unknowable by man.

In essentially the same way, in more recent years, has Mr. Bradley worked the distinction between "Appearance and Reality" so as to confine all the achievements of the intellect to the maze of contradictions that are inherent in the world of seeming, while being forever excluded from the assured knowledge of the world that is real, and the theatre of actual events.

In another, and as he supposed more learned and satisfactory way, did Sir William Hamilton propose to fix the unalterable limits of human knowledge. His formula he consecrated as the "Law of the Unconditioned." All the conceivable for man lies between two contradictory but equally inconceivable opposites. Of these opposites, though both are inconceivable, one is necessary. You either become a despairing agnostic or cling by faith to one of the two inconceivables. This Hamiltonian formula Dean Mansel applied

to the limitation of thought on topics of religious moment, but in the supposed interests of religious faith, with a special permission in the name of man's intellectual constitution to believe in the absolutely inconceivable. We have already referred to the way Mr. Herbert Spencer caught up the admissions of Sir William and Dean Mansel in favor of his own attempt to reconcile science and religion on the basis of the admission that the true being of the world is forever the Unknowable.

To all these attempts and to all similar attempts, however elaborately and skilfully dressed out, there remain two fatal objections. They are based on a totally false conception of the nature of knowledge, quite irrespective of its form or of its degree. Knowledge is never *of* phenomena or appearances only. A sense, a conviction, a more or less developed conception and a more or less firm grasp of reality, belong to the very essence of knowledge. We do not sense the phenomenon, although the act of sensing may be considered as a phenomenon; we know by our senses something of which we are sure, about the thing itself. When we say, "It looks, or sounds, or feels, so and so," we never think of ourselves as talking about, as it were, detached appearances, but about the actual qualities of real things. And he makes a mockery of the most intense and realistic of all human experiences who tries to reduce our beliefs and thoughts and formulas concerning the active causal rela-

tions among things, and between minds and things, to the thin and ghostly shape of a merely temporal sequence in the phenomena or appearances of wholly unknown realities. There is in general a sincerity, and oftentimes there is a terror, that accompanies all our growing acquaintance with the relations and uses of things, such as to leave no room for doubt that they are not dependent on our ideas or our wills for either their existence or for the causal powers which we learn to know that they possess. No! the distinctive and most obvious quality of our human knowledge is denied when it is reduced in its application to the phenomenal and apparent only.

Carrying out this thought into the interpretation, not so much of the conscious activities of the individual in every act of knowledge, as of the fundamental beliefs and conceptions which characterize the foundations of science and the historical development of all the sciences, we disclose another fatal objection to the Kantian way of limiting knowledge. Science admits the existence of an indefinitely vast ocean of the unknown surrounding the island already only very partially explored by the human intellect. But it is the ocean of the hitherto unknown rather than of the essentially unknowable. Its sturdy mariners are all the while, with better built ships and greatly improved instruments of navigation and of survey, plowing their way in every direction out into this vast ocean. They

are adding to the precision and extent of its charts. They are discovering new islands, from which as its annexed territories, science may advance to still further explorations of the unknown but not the unknowable. And it never once enters the heads of the scientific explorers, except when they lay aside their work-a-day faiths and dream in terms of an enervated metaphysics, that they are simply making new combinations and concatenations of phenomena rather than increasing the extent and the precision of the world's stock of knowledge about actual events in a system of interacting real existences. Knowledge, so long as it is partial and finite, is limited indeed; but not in such a way as to make it no true knowledge. Knowledge is always and essentially *of* realities and never merely *of* phenomena. To the question how knowledge and the realities are related, we shall return at another time.

But there is another and much more subtle way of drawing the limits around all human knowledge. The essentials of its contention must be admitted; though the most agnostic of its conclusions may be averted. This is the doctrine of the so-called "relativity of all knowledge." This doctrine is as old as the historic beginnings of the line of philosophical development in which we are standing today, although it was traced anew and in more compelling form by the author of the modern critical philosophy. "Man is the

measure of all things; of that which is, how it is; of that which is not; how it is not": — so ran the already once quoted maxim ascribed by Plato to the Sophist Protagoras. And the essential truth upon which Kant founded his psychologically false and mischievous distinction between phenomena and noumena was this: it is the constitution of the human mind which determines how all objects shall be apprehended by the senses and comprehended in their various relations by the intellect. Undoubtedly, man is for man the measure of all things. But does it follow from this that, for every individual man, that is true and real which at the time appears so to him; and — a conclusion still more fraught with baleful consequences — that there is possible for humanity only a subjective and relative, not an objective and universal truth?

Man is, of course, the measure of all man's knowledge; and, indeed, what other measure could there possibly be? This declaration may be so expanded as to make us sure, first, that the essential nature of his knowing faculty limits his knowledge; and, second, that no guaranty of the trustworthiness of knowledge can be found outside, so to say, of this same faculty. To express the truth in familiar figures of speech: "The greyhound cannot outrun his own shadow"; "The bird cannot rise above the atmosphere," etc. Hence, whatever claims may be made for the philosophical intuition of the Absolute or

the mystical intuition of God; for communion by thought-transference with friends over seas or by mediums or materializations with those beyond the grave; for miracles, whether wrought by immediate divine agency or through the alleged power of salvation-mongers; they must all conform to the constitution of the human mind and the ways of its functioning, in order to be apprehended and criticized, whether for acceptance or rejection. And this complex faculty of knowledge is itself in a process of evolution. But however it evolves, human *knowledge* will always be only *human* knowledge. And, indeed, — we ask again — what else could it possibly be? What else could any knower wish it to be?

The reasonable interpretation of the principle of the relativity of all knowledge should afford the person who asks himself seriously the question, What can I know? two practical rules of no small importance and helpfulness. The first is, not arbitrarily to fix the possible limits of knowledge in any particular direction: the second is, not in vain to beat against the bars which set the limits between the possible and the impossible. Both these salutary rules may be illustrated together by a few examples. Sir Isaac Newton insisted that all "natural phenomena," including the biological, should be reduced to "mathematical laws." Much saner was the conclusion advocated centuries earlier by the greatest thinker of antiquity, the philosopher Aristotle. He held

that the different matters of science differ in themselves so essentially that they do not admit in their treatment of the same method of "precision." And by *precision* he meant a combination of mathematical exactness, metaphysical subtlety, minuteness of detail, and definiteness of assertion. With reference to the possibilities of knowledge of the biological order it may not now, and it may never be, quite possible to affirm with assurance the universal domination of mathematical laws. We think it safe to say, however, that the student of psychology who affirms that there are no facts and laws of man's mental life which lie forever outside of the province to which the formulas of mathematics can be made to apply, or who seeks for a method of studying mental life that shall dispense with its essential characteristic, so far as known or knowable by us, of being conscious and self-conscious, has set his limitations well beyond the boundaries of mental sanity. To apply mathematical laws inexorably to the beliefs of art, morals and religion, does not serve to raise these beliefs to a place within the category of knowledge — where another method of treating them may, perhaps, place them. It serves, the rather, to incapacitate the individual knower with respect to his ability to apprehend truly the bare facts of such beliefs.

On the other hand, the triumphal path of science is strewn with the remains of declarations about the possible and impossible for human knowledge,

which have already been altogether transcended. It is only a few years since the atom of modern chemistry appeared to be what its name signifies that it ought to be, — namely, the smallest element of material reality, which by no known means could be cut in two or otherwise made many. But we now know that every old-fashioned chemical atom is a system of innumerable much more minute elements; and these even we seem right on the verge of being able to make visible to eyes equipped with the requisite apparatus. Only a little longer ago, it seemed certain that we should never sound the depths or map the shape of our physical universe. In a remoter past, the depths and the shape were thought to be discernible by the eyes of the star-gazer, be he only some shepherd of the upland or the plain. But now with telescope and spectroscope the utmost and the hopeful efforts of the world's greatest astronomers are bent on determining within certain allowable limitations for error, how vast and how shaped our Universe really is and what are the physical laws which it has been following in its myriads of evolution.

Or, to take more vulgar examples. It was never going to be possible to cross the ocean in steamships, just as it now seems impossible that we should ever conquer its dangers by crossing it in the air. Railroad trains were never to run with safety, at least with a rate of more than ten or twelve miles an hour. Coming back again to

the history of science, we may recall the fact that the great physiologist Johannes Müller, only about seventy-five years ago, declared that we should never know the speed of the nerve-current, since its speed was comparable with the speed of light. But seven years later, Helmholtz demonstrated the speed of the nerve-current in the leg of a frog and thus led the way to all the later knowledge on this matter acquired by the science of nerve-physiology.

To turn the problem around once more and look at it again from the reverse point of view. No doubt not a few of the claims of men of science, and as well the statements of the reporters of interviews with men of science, as published in the newspapers, encourage the belief that we shall one day know what is intrinsically unknowable. We may enlarge the magnifying power of our microscopes and telescopes and devise indefinitely finer gratings to assist in spectroscopic analysis. But we shall never see the essentially invisible, or even properly imagine it in terms of visualization. We shall never hear the intrinsically inaudible with improved telephones; we shall never touch more surely, or handle with more delicate fingers, the forever intangible. We shall never grasp with the intellect that which is by its nature unthinkable. We shall never stand face-to-face in intuition with an object that does not present toward us a face essentially like our own. Each thing will be known, if known at all, in its own

proper way. It will be known by man only as it is knowable to man. The mind, however much it may develop, will always set its own limitations. But within those limitations it will constantly increase the domain and heighten the degrees of its knowledge.

CHAPTER VI

WHAT MAY THE KNOWER TAKE FOR GRANTED?

WHENEVER the human mind assumes the critical attitude toward its own faculties, a curious circle in the argument inevitably results. The condition of perplexity somewhat resembles that of the unfortunate man who, having all his life long unswervingly believed in the trustworthiness of dreams, one night dreamed the doubt, — that all dreams are, on the contrary, untrue. For how shall the mind, otherwise than by exercising its power to know the truth with a confidence in its deliverances when critically employed, learn what is the ultimate truth in regard to the truthfulness of this power? Critical activity and activity criticized must always be subject to the same limitations; they must operate, whether in the production of truth or falsehood, under the same laws. Or, as was said when considering the limits of knowledge in the last Chapter, "The essential nature of man's knowing faculty limits his knowledge"; and "No guaranty of the trustworthiness of knowledge can be found outside of this same faculty."

From a slightly different point of view, however, we seem warranted in affirming that no other use of man's faculty of knowing is so utterly beyond the intellects of the lower animals, in a way so godlike, as the use made of it in the attempt at self-criticism. We may marvel at the intelligence of the trained horse or dog; and even more at the skill and precision with which what we, in our ignorance call "instinct," has endowed the ant and the bee. We may even suspect a kind of divine cunning in the roots and tendrils of certain plants, not to speak of the marvellous performances of amoeboid bodies like the spermatozoon or the white blood-corpuscle. But we never for an instant have the remotest suspicion that any animal has proposed, or ever will propose, or by any amount of training can be made capable of proposing, to itself or to others of its species, the problem of the Critique of Pure Reason. No other activity, human or divine, can be conceived of, that affords a ground for confidence in the essential trustworthiness of man's knowledge, which is comparable with the proof that lies implicit in the power of self-criticism. The ability to doubt, and to examine the reasons for doubt, is the counterpart of the ability to know. Only the right to be agnostic constitutes the knower as a judge of truth; but the complete agnostic is self-judged as guilty of high treason in the court of Reason, divine as well as human.

We have just spoken of the curious circle of argument into which the mind is thrown by the result, and even by the bare proposal, of an unsparing and fundamental criticism of its faculty of knowledge. This circle may be traced in outline through the entire history of reflective thinking; but its path has been tramped into plainness and marked out by not infrequent guide-boards, since the modern critical philosophy made the issue of the journey so clear. How can we have any system of metaphysics, any scientific or religious theory of the origins and essential nature of Reality, as long as we do not know whether man's reason is level with the task of propounding or comprehending such a system or theory? But, those who see clearly that all scientific as well as religious theories are inextricably interwoven with fundamental beliefs; that even the most ordinary and necessary forms of knowledge, whether they concern the nature or the uses of things, are shot through and through with instinctive metaphysics; and that the mind cannot possibly shake off, or see the other side of, the assumption that its knowledge is all *of* reality, — those who see clearly these truths, ask this question: How can you criticise human reason in essential freedom from the constitutional forms, the enforced assumptions, and the indubitable faiths, of this same human reason? We only employ figures of speech which have been already consecrated by a century or more of philosophical

squabbling, when we view this circle in the spirit of laughter. How dare one try to swim until one knows the specific gravity of the human body as measured by the standard of a cubic foot of water, and has thoroughly mastered the psycho-physical apparatus that must be set into operation in the dangerous activity of swimming, and perhaps, has also experienced something worth while of the emotional side, the feelings of fear and joy and pride which are likely to be called up by a venture over-head in stormy waters? In a word, how dare one try to swim in a fluid that may not bear one up; that — we grant — allures, but will probably forthwith strangle you? But, say the other school, the thinkers who believe in metaphysics; How shall man learn to swim if he does not go somewhat boldly into the water? And do we not in fact find that even human babies, when thrown into the water show something notable of the swimming instinct; just as they do of the creeping instinct when laid on their bellies on the floor? With the more refined use of a figure of speech, Lotze has compared those who insist on a finished and universally accepted theory of Knowledge, before they will undertake the construction of a system of metaphysics as a theory of Reality, to the players in an orchestra who should be forever tuning their instruments before they ventured upon the attempt to play a tune.

Now the only sensible and serviceable inter-

pretation of all this, so far as the contention has any truth to tell us about the problem before us, is not at all hard to discover. Criticism and use of the human faculty of knowing have always advanced together in a sort of mutual dependence, if not actually with even pace and hand in hand. The mind of man knows better what it really knows, the more it learns by self-criticism what it really can know. In the history of the development of speculative philosophy, epistemology or the critical theory of knowledge, and metaphysics or the carefully criticized theory of reality, have advanced according to the serious and respectful consideration which each has vouchsafed to the other. And the glorious orchestra of the positive sciences, as the numerous players in it learn better how to tune and use the many new instruments which are being introduced, make fuller and more inspiring harmonies in description and in praise of the Orderly and Sublime Whole, the Universe, as it really exists and actually behaves. Nor do we think that to the common mind, at least when it becomes interested in the question, What can I know? all reflection ought to be denied over the related question: What things may I take for granted in all my attempts to grow in knowledge? Every knower is entitled to sample some of the extracts from the crushing press of the critical philosophy.

The things to be taken for granted in all human knowledge may be somewhat roughly divided into

two classes. There are, first those things which *must be* taken for granted by every knower whether he will or no; and there are, second, those things which every knower *may quite reasonably will* to take for granted.

In every kind and act of knowledge there are some things which the knower is compelled to take for granted. He may not be conscious of the compulsion, or he may be very keenly and even painfully conscious of it. He may regard the compulsion as a privilege, as indeed a share in the way in which God himself knows, with his infallible intuition, that things really are; or he may regard the compulsion as a species of slavery, as a trick of a jealous Providence to exclude man forever from a share in divine, infallible insight into the hidden truth of Reality, or even as the scheme, baffling the noblest intellectual aspirations of humanity, enacted and enforced by a malignant demon. But all this makes not the slightest difference with the result as a controlling law for the knower.

The particular sciences have for centuries recognized with considerable precision certain so-called axioms or postulates, the truth of which must be assumed as bases or points of starting for all their advances into more distant fields of knowledge. This is especially obvious in the science of mathematics in all its main branches. In arithmetic and the arithmetical forms of mathematics, the validity of that complex faculty

which makes man able to count and to compare and manipulate numbers ascertained by the process of counting, is taken for granted as applicable to all real things and actual events so far as their quantity and quantitative relations are concerned. Man's numbering of things and forces is knowledge that rests upon the assumption that things and forces are really numerable. Again, that admirable example of compact logical demonstration, the Euclidean geometry, makes it a part of its task, preliminary to all its reasoning and as a guaranty for it all, to set forth an elaborate system of axioms and postulates, or things taken for granted. Among such, a notable instance is the postulate concerning parallel lines. To say that parallel lines never meet is no better than to utter the childish truism: lines that do not meet do not meet. But let us throw the postulate into the form of a problem and declare: If on the straight line AB, we erect at any distance two straight lines, AC and BD, at right angles with the line AB, and lying in the same plane, and then measure off upon them the same distances and connect by a straight line the points C and D, then the line CD, which measures the distance between the lines AC and BD will be of the same length, no matter how far the lines AC and BD are produced. This proposition, however, centuries of mathematical experts have failed to demonstrate, although no one of them has had any doubt as to its abstract truth.

Every carpenter and mason and surveyor, who uses square and rule or tape and theodolyte, takes for granted the same truth when applied to the measurement of things.

All the positive sciences, in their dealings with the quantities, sizes, distances, weights, etc., of the objects which they observe and investigate, assume the right to apply the mathematics of number and of geometry to these objects. But this is not all that is taken for granted. It is the extension of things, their comparative sizes and distances in space, and the length of the time it takes for changes in the character and the relations of things, and the order of the succession of events, to which the principles of measuring and numbering are assumed truthfully to apply. But things could not be distinguished, could not therefore be either numbered or have their limits determined, much less could they be grouped in classes and given common names, so as to make recognition of them possible, and communication about them possible between different individuals and generations, unless things had really different modes of behavior. That these different modes of behavior, or qualities in action, really belong to the things is also a truth which must be taken for granted; otherwise we could not attain any knowledge of particular things, or even gain the conception of what it is to be a particular thing.

To throw what has just been said into the stiff and abstract language of philosophy, we may

announce the so-called "categories" of number, quantity, space, time, and quality, as taken for granted in their application to all knowledge, whether it is knowledge of "first intention," just at the moment being acquired by use of the senses, or knowledge implying more of recognition as the result of previous experiences with things. All the positive sciences build themselves on foundations of a perfect confidence in the objective validity of these categories.

But things in their different modes of behavior, or qualities in action, usually, if not always and of necessity, seem to be paying some attention to one another. This thing behaves in this particular way, because some other thing is simultaneously behaving, or has just behaved, in some other particular way. Even if the two or more things are simply doing nothing in particular, and at least by way of influencing each others' behavior are just standing still as though they were idlers in God's universe, still, if known or thought of together, they must be regarded as somehow or other really *related*. But "Relation" is such a curious conception, or so-called category, that it has sometimes expressively been called "the mother of all the categories." Who shall define what it is just simply to be related, without specifying any particular kind or set of relations? The general conception of "being related" is as indefinable in its nature as it is to be taken for granted in all the apprehension and comprehen-

sion, all the mental picturing and severest science, of every kind of things, both physical and spiritual; and in all kinds of events, in both the physical and the spiritual realms. So true is this, that the German philosopher Lotze undertook to identify the conception of relation with the very conception of existence itself. "To be is to stand in relations," said Lotze. But it is just as absurd to try to think of "standing in relations" without assuming some real things which are at some particular time standing in some particular relations, as it is to try to think of some real thing that stands in no relation of any kind to other things. That things can neither exist for us, nor be known by us for what they really are, without the thought of relationship — so to say — being applied to them, is one of the truths which every knower, in every act of his knowledge, must take for granted.

There are certain relations, to stand in which toward all other things is assumed by the human intellect as a matter of course, with respect to all manner of things. Of these, some have already been enumerated, such as relations of quantity, relations of number, relations of likeness or difference in quality, relations in space, and relations in time. All these may be said to be fixed and irremovable, because they are of the very nature of the intellect itself. They are the constitutional modes of the functioning of the human intellect. So far as these are merely

formal, enough for our purpose has been said about them in the Chapters on the Nature of Knowledge and On Thinking One's Way through a Subject. Among the assumptions that are not so purely formal, but seem most needed and are in fact most used, in the efforts of the human mind to grow in verifiable knowledge of real things and actual events, is the so-called principle of causation, or relation of causality, or law of cause and effect. Unfortunately, also, this assumed principle of causation, if it be indeed a principle of necessity and rigidly to be taken for granted, is of all others the most complicated and, in some of its aspects, most dubious. It is the one over the origin and obligations of which there has been from time immemorial the most wrangling.

There can be no doubt that, of the many relations under which we are obliged to view things as really existing, one of the most constant and impressive is the relation in which one thing is said to influence another thing; one event to effect, or at least to contribute toward effecting, another event. This is equally true, though not esteemed to be true in precisely the same manner, whether the events are among things, or between minds and things, or apparently confined wholly within the mental realm. It is the wind that brings down the chimney; it is the blaze kindled by the matches that the mouse gnawed, which, sets on fire the house; and it is the water thrown by

the engine driven by steam and directed by the firemen, that did, or did not, succeed in putting out the fire. But just as truly, it is my burned hand which gives me pain or makes me cry out, and my volition which withdraws the arm and suppresses the cry; and scarcely less truly, it is the idea of the death or infidelity of the friend of *auld lang syne* that impresses me with uncontrollable sadness for the entire day.

That this relation of causation is not to be taken for granted for all cases of its seeming warrant is evident to any mind that will go fresh and unstamped with prejudice to our actual experience for the derivation of his views. A largely unwarranted conception of the nature of the principle, and a vastly illicit extension of its application, have resulted from a curious combination of fatalistic theories in ethics and theology with the extremes of modern mechanical theories of the physical universe. The truth is that instead of insisting on the application of the causal principle to the explanation of all our experience, we find that every attempt to explain one thing or event by some other leads us forthwith face-to-face with ultimate facts which are essentially inexplicable. More definitely stated, the very use of the causal principle depends upon the assumption of facts to the explanation of which there seems to be no chance of bringing the principle to apply. And this is as true of the knowledge of modern science as it is of that of

the so-called primitive man. Why did the shaft of lightning fall on that particular person, or his dwelling, rather than some other? It was because the god who hurled the bolt was angry at him as at no other. But why was the god especially angry at him rather than many another? Because he had particularly insulted the god or had failed to do him reverence. But why should this make the god angry? In answer to such a question as this, the primitive man can only stare at you for your ignorance or wax wroth at you for your impudence. Do you not know that it is the nature of gods to be angry when treated in this way by men?

Turn now and put the same question to the primitive man's brother-man, the distinguished professor of the physics of electricity. His answer will begin in a totally different way and will run a totally different course; but it will soon end in essentially the same manner, — up against an impassable wall in the same blind alley. We shall hear about the laws which control electrical currents, of positive and negative poles, of attraction and resistance of different degrees and belonging to different substances. And perhaps we may be taken farther afield into the regions of allied branches of general physics. But finally we shall come up against an impassably high wall at the end of a blind alley. And the man of science will be obliged virtually to say that certain things under this form of influence called

electricity behave in such rather than in some quite different way, because "it is their nature to." This, as we know, is the reason why dogs bark and bite. It was the reason why the god behaved as he did behave. And when we inquire what is really meant by the *nature* of a thing, we are given an indefinite and unfinished conception which is a conglomerate of various observed or inferred forms of behavior. So the thing behaves in its relations to other things, because such is its nature. What do you mean by its nature? Simply this, that in such and such ways it regularly behaves. Thus all the reasons which explain, so far as explanation for us is possible, find their origin and their final accounting in the womb and in the lap of the one Dame Nature, the prolific but fairly (only *fairly*) consistent Mother of them all.

From this view of our use of the causal principle, in the form in which its truthful application to things may be taken for granted, two or three important conclusions may be drawn. Events that have no necessary origin in the causal activities of other events must be freely admitted, whether we find their explanation under the causal principle "sufficient," or not. Every thing, especially every living and growing thing; but above all, every being that undergoes a marked course of intellectual and moral development, must be looked upon as in some large and real way an original source of its own activities.

They cannot be truthfully explained as wholly arising in the influences exerted over them by other beings. The argument against this conclusion, which takes the form of the so-called "endless *nexus*," or chain of causes, is a dangerous fallacy derived from a misleading figure of speech. In reality there is no such endless chain discoverable or necessary to as full an explanation of experience as it is possible for the human mind under the most favorable conditions to attain. Every event, no matter how simple it may seem, and whether it occur in nature or in human history, is a new combination into which, for its effecting, enter a multitude of beings, each one of which has its own nature and its characteristic way of reacting to the relations, active and passive, which it sustains to all the other beings entering into the same combination.

But a more careful and profound analysis seems to show that the primitive man and the advanced man of modern science do not differ so essentially as would seem at first sight, in their interpretation of the principle of causation. By the primitive man the fall of the thunder-bolt just then and there is explained in terms of will, stimulated by emotion, and guided by intellect to accomplishment of the deed. The man of science talks about forces, or kinds and amounts of energy kinetic or stored, about laws which can be formularized in mathematical terms and, if possible, tested experimentally; he does his best to banish from his

explanation all suggestions of conscious purposes or of the realization by the event of moral emotions or social interests. But his explanation is just as truly anthropomorphic as that of his ancient and untutored ancestor. He, too, explains by a species of personification. And, indeed, — to put the same question with a sort of wearisome reiteration, — What would you have? What kind of knowledge that does not result from human knowing faculty could you expect human beings to possess?

Let us examine this charge of personification (if we are debarred from using the more malodorous charge of anthropomorphism), as it lies against (in favor of?) the modern man of science, in all his use of the principle of causation, a brief moment longer. He ascribes the event to the action and reaction of various forms of energy. But where does he get his conception of energy? and, Where his warrant for applying the conception to the behavior of physical things? As those most skilful in psychological analysis are pretty nearly unanimous in holding, the conception comes from his experience with himself as a will. His acts of will are often, if not customarily, accompanied with the "feeling of effort," and they are followed by important changes in his own bodily organism and in the things which environ him, so far as they are in suitable relations with that organism. It is not by the senses of sight or hearing or touch that he can ever become

aware of energy as belonging to, or interchangeable between, outside things. Indeed, the very thought of energy as something actually "seated" or "stored" in things, or as passing between things, awakens feelings as comic as those with which we watch a Punch and Judy show. Things are puppets; and jolly Dame Nature stands hidden behind the screen and pulls the strings that move the puppets. Things, so far as they are separate and individual, are endowed by modern science with wills of their own. So far as they influence one another, they are recognized as having a certain regard for each others' wills. So far as they constitute one great system, a Universe of things, they are esteemed as being under the control of one Will.

But these evidences of energy, the changes in things that are significant of individual wills or of a common Will, obey laws; at least, although they not infrequently act in a seemingly arbitrary way, they more uniformly admit of a good degree of calculability. We can generally tell about what things with which we are fairly familiar are going to do. And in the more exact of the sciences, — for example, in astronomy and certain branches of physics, — modern science can predict events with a gratifying degree of certainty. It can do this — that is to say — if the time to which the attempt at prediction is extended is not too far away. For all the exact sciences put together *know* little or nothing precisely, as to what was

millions of years ago, and practically nothing as to what will be millions of years in the future.

What, however, is the real meaning of all the talk of science about regular modes of behavior, about obeying laws, and about principles holding so and so, in the realm of things? It has no intelligible meaning except as a recognition of the dominance of intellect in the realm of things. For the conception of "law" cannot be construed on a purely sensuous basis. And to talk of laws "over" things, is as absurd as to talk of energy as resembling an entity "seated in" things. Here again we suspect the invisible strings of the ancient puppet show. To be sure, emotion must not be allowed any place in the account which science gives of the way that causes operate to produce changes in things. The burning of Sodom and Gomorrah in the sulphur plain of the Dead Sea must not be *scientifically* explained by bringing into the account the wickedness of the inhabitants and the wrath of Elohim thereat. This would involve the very worst kind of anthropomorphism, which is "anthropopathism" (dreadful word!). Yet even science, when the event is in part the consequence of human conduct, may speak of it as nature's punishment for wrong-doing. And when the scientific man complains of the way the world treats him as not corresponding to his deserts, or dubs Nature as "red in tooth and claw," he comes perilously near to ascribing a certain inchoate outfit of moral

emotions to the Source of all the forces and laws which operate at the heart of things.

It is not our present purpose to argue the case between the interpretation of the causal principle, when stripped by a species of abstraction of all the features which give it life and warmth as applied to our experience with physical things, and the religious convictions which regard the same events as manifestations of immanent Moral Spirit, and tokens of all-pervading Providence. Both the scientific and the theological views may be correct, and not contradictory, but, the rather supplementary, if we wish for a fuller knowledge of the causes and the meaning of things and of events. We ourselves believe most firmly that such is the case as it appears to one who sees beneath the surface into the nature and uses of human knowledge. But however this may be, it seems obvious that the employment of the causal principle which the growth of knowledge requires us to take for granted as legitimate, is always and essentially, a species of the personification of things.

It would be a task audacious in its proposal and tedious in its attempted execution, to give a complete list of the ideas about things and the relations of things which *must be* taken for granted by every knower in every act of knowledge. If we go no further, we shall seem to have stopped well within safe limits. Something more must be said, however, as to the way in which the mind

takes its own principles for granted. This certainly is not by the way of holding them up before consciousness and "envisaging" their originality, unavoidableness, and incorruptibility. It is equally certain that it is not by the way of searching out their origin and history as a matter of biological development. The very attempt to envisage the so-called categories and to criticise them implies that they have long time been in use; the very attempt to explain their evolution involves their nature and control as already evolved. To apply any doctrine of evolution to them not only implies what every form of the metaphysics of evolution inevitably implies — namely, the necessity of putting in at the beginning all the essentials which you are going to take out at the end —; it implies that you are evolving the principle of all evolution as already self-evolved.

An entire page of a much larger book than this would be necessary barely to enumerate the words or short phrases which have been deemed necessary to express what the mind is compelled to take for granted in its knowledge of all things. Among such words and phrases are the following: judgments of nature, seeds of science, seeds of eternity, living sparks, first principles, principles of common-sense, ultimate or elementary laws of thought, *a priori* cognitions, innate ideas, categories of thought, natural beliefs, rational instincts, etc. But the purely figurative nature

of most of these terms is sufficiently apparent to any one who will give them only a brief attention. The truth of experience is perhaps as well represented by such terms as "principles of commonsense," "elementary laws of thought," as by any others that can be readily devised. What is really meant by these or by any other similar terms can only be made clear to the consciousness, and useful in forming the convictions and practice, of the individual knower by a process of self-reflection which no mind can undertake modestly or perform successfully for any other.

So much at the very least as has already been described must be assumed to be true with respect to the validity of the forms which the mind imposes on things and at the same time faithfully and reasonably believes it finds existent in the real nature and actual relations of things. "So much at the very least"; but there is plausibly asserted by not a few philosophers and men of science, to be a good deal more. So confident have certain students of physics become in their possession of the ultimate principles of the construction of the Universe that as one of the most notable among them has said, with a wit as keen as his scientific insight: "The first two principles of the Newtonian philosophy have already become *a priori*, and the third is likely soon to become so." And there are even biologists just ready to tell us, on grounds of necessary truths, how the world of living beings including man

must have been evolved. Nor are the theologians all deceased, or perhaps they are not greatly diminished, who are ready to demonstrate an "innate idea" of God after the scriptural pattern: while to the philosophers who claim "intellectual" and other forms of intuition for their conception of the Infinite and the Absolute sufficient reference has already been made. In the interests of credibility as well as scientific economy we refrain from the attempt to increase the list of those "common-sense-principles" or "elementary laws of thought," which have a rigidly compulsory character.

Indeed, it is evident that the last of the claimants to a place among those assumptions about all things and events which *must* be taken for granted, — namely, the category of causation, — does not stand on at all the same plane with the others. There are millions of men, and those not the least observing of themselves and thoughtful about natural phenomena, who do not for a moment believe that their own choices are subject to the principle of causation. Now, whatever we may think of the cogency of the arguments of those who maintain the contrary view, we are obliged to conclude that the very attempt to argue the case disproves the absolute necessity of accepting, as *a priori* truth, either side of the contention. The fact seems to be that the attempt to bring the entire development of the mental and moral life of man under terms of a

strictly mechanical theory is a curious perversion of the order suggested by all our experience. We are first of all, conscious of ourselves as apparently true and original sources of activity, genuine authors of psychical events, and through such events, of changes in external nature; we in the next place, interpret external events after the pattern of our own experience; we find the amounts (extension or intension) of these changes measurable and computable in terms of number and to be expected with a fair degree of regularity; we construct on the basis of this kind of experience an ideal mechanical theory; and we then carry back our mechanieal ideal to the life of free-will in pursuit of moral and other ideals, and persist in the attempt to squeeze it into strict conformity with this theory. No wonder, then, that, while some *will* have it that the casual principle must be applicable to all beings and all events, others *will* have none of it as understood in this way.

There are certain things to be taken for granted, however, which plainly belong to another class. They are general assumptions to which a man may pin his faith, and in the assurance of which he may reasonably conduct his mental and moral life, although perhaps not absolutely compelled by the nature of his knowing capacity to make them universally applicable. We shall mention three of the most comforting and helpful of these assumptions.

TAKING FOR GRANTED

Every knower may take for granted a certain reasonable confidence in his own faculties. They are not infallible; they are very far indeed from being infallible. But they are, of course, for every individual the only available organ of knowledge. By constant observation, patient and docile learning, steadfast repression of the solicitations to self-deceit, and respectful regard for the emotions and beliefs which underlie the life of art, morals and religion, the average man may develop as a knower worthy of self-confidence. By doing his daily work well he may surely learn to do it better. By weighing of evidence in an unprejudiced way, he may raise his knowledge-judgments to higher degrees of certainty, or know better how to be wise in his agnosticism and frank in his confessions of ignorance. And finally, he may in time do much to correct those temperamental tendencies, which must indeed always characterize him as an individual knower, but which when habitually "brought to heel" in the interests of intellectual soundness and of the righteous conduct of life, become less and less powerful to lead the mind astray.

"Sperate miseri;
Cavete felices."

"If unhappy, have hope;
If happy, be cautious."

Such are the exhortations which the author of its Anatomy gives for the control of tendencies to Melancholy. With a different application, and

in a more abstract form, we may propose as a maxim for avoiding the temperamental dangers which encompass every individual knower: "Bring your will to bear, in the interests of a sweet reasonableness," on your impulses, so-called instincts, and irrelevant emotions, when you are forming your judgments.

With more assurance may the average knower accept as part of his knowledge, assuming them to be true, the generalizations arrived at by race-experience and transmitted from generation to generation, either as part of the body of acquired science, or of the body of maxims governing wise action in practical affairs. Many of these generalizations are, indeed changing more or less materially from age to age. Few or none of them are proven beyond all possibility of captious dispute, if not of reasonable doubt. But they are, from their very nature, the embodiments of the experience of the race. Not a few of the most important of them are today being tested as never before by the exact methods of modern experimental science. And so wide-spreading and easily accessible are the conclusions, arrived at in this way, being made to the multitude of men, that the average man has a chance of knowing whether these ancient traditional forms of judgment and belief are proven true or proven false.

But over all, and under all, and in and through all, is a certain implied theory of the Universe whose products and children are the human race

and all individual men. This universe is known, and can be known, only so far as it is itself knowable. Said in another, more figurative but no less impressive way, things and events are the objects of mind because they are in their nature and ways of behavior moulded by mind. Things that had in their nature no impress of mind and that did not act in ways comprehensible, at least partially, by token of these impressions, could never become objects of knowledge. Stated in a large way, we may claim that every reasonable man has the right to assume, as a sort of general postulate for the possibility of knowledge, this truth: The world is, so far as it is knowable, the embodiment of reason. To this larger Reason, embodied and manifested, so to say in the system of things and events, the reason of the knower answers in every act of knowledge. Such knowledge is not *of* phenomena; it is not *of* dead and irrational things or *of* events devoid of all rational connection. The rationality of the World, and so its fidelity to the conclusions of human reason and to the demands of the practical life, is an assumption which underlies, and which is ever being more and more confirmed by, the advances of all the positive sciences, both the chemico-physical and the psychical and social. It is also an assumption in which the average knower may find much comfort and help in the conduct of life.

CHAPTER VII

ON THE WORTH AND WAY OF SELF-KNOWLEDGE

THE value of the knowledge, both theoretical and practical, which we gain of ourselves by reflection, depends upon the kind and the manner of its attainment, but chiefly upon the use we make of it. If, then, there is reason on the one hand to welcome the exhortation of the Delphic oracle, "Know thyself," there is almost equal reason to heed the warning given to Oedipus of the dreadful consequences sure to follow upon unduly pressing the search after this kind of knowledge. Whoever wishes to answer for himself most profitably the question, What can I know? will feel bound to give some consideration to the worth and the way of self-knowledge.

The technical and elaborate metaphysics of the inquiry into the nature of the human Self is — to borrow a figure of speech derived from other obscure and difficult journeyings — reached only by a speculative climb up an arduous and steep path. But it is, as respects its essential features, of necessity, the possession of every sound and

normal adult mind. Indeed, a trace of it can scarcely fail to escape the human idiot; while not a few of the insane have a theory of their own reality and actual doings and characteristics, which is the more thoroughly penetrated with unassailable convictions the more fantastic it has become in the sight of other men. With unwavering confidence they *know* themselves to be what every one else, with a more sane but less intense consciousness, knows that they certainly are not. Thus, in spite of the universal prevalence of the common-sense views there is perhaps no other set of metaphysical puzzles which call forth more controversy, or which can be said even down to the present hour to be in a more unsettled condition, than those belonging to this class.

In the very face of the facts just mentioned, however, we feel the utmost courage in attacking and pressing our way a little distance into the metaphysics of the human self. And first of all it may be affirmed that the knowing mind knows three things about itself; and that it makes these three the implied assumptions or sleeping postulates of all its other knowledge. "Sleeping," most of the time, they may well be said to be. And when they are awakened by the mind's own critical inquiry, or by questions pressed upon it from without, the knower is not unlikely to contemplate them with an air either of astonishment or amusement, depending on temperament or upon the passing mood.

Every Self knows itself to be real, to be in some sort really self-identical, and in some sort really one. The reality, the identity, and the unity of the knower are known by himself; they are assumed as known, in every act of knowledge. But I have said "*in some sort*" real, "*in some sort*" identical, "*in some sort*" one. The kind of reality which the mind knows itself to be has its meeting-point of indubitable conviction and perfect objectivity in every self-conscious act. This, as already explained, is the truth of the Cartesian formula. It makes no difference whether the activity is one of affirmation or denial, one of faith or doubt, or whether volition, intellect, or emotion, is its predominating characteristic; the case is essentially the same. Whenever and however I am self-consciously active, I really am. The knower and the thing known are but two aspects of the reality. The subject and the object of knowledge is one and the same real being. But it is only as then-and-there, in such or such a "state of consciousness" or "form of functioning," that I am the sun-clear and incontestably real object of self-knowledge. The antecedents, the accompanying conditions, the real or assumed causes, the unconscious factors or "fringes" of this state of self-knowledge, are the intricate and baffling subjects of psychological, psycho-physical, and biological science.

But — so the man of common-sense may ask with a sort of rising indignation — what value

for a theory of the mind or for the purposes of the successful practical life has such a fleeting reality as this? A succession of such realizations of selfhood is scarcely worthy of the deprecatory title — "a stream of consciousness" — given to it by certain advanced leaders in the science of the mental life. For, although every real stream is constantly in a state of flux, its different parts must somehow remain real, otherwise there can be no stream. But with the so-called stream of consciousness nothing of the individual parts remains behind wherewith to constitute the stream. And are not some of the smartest of the modern students of psychology, with an assumption of superior scientific concern on their very countenances, asking whether we may not dispense, not only with all metaphysics, naive or scholarly, but also with the very concept of consciousness itself? Thus we should be able to rival our colleagues in the physical sciences and explain the total puppet-show by assuming different degrees and directions of the pull of the strings concealed by a vail, like that of Isis which no mortal man may dare to lift. But after all, these doughty champions of scientific exactness — say rather, of an impossible and self-contradictory agnosticism — are just as sure, and sure in just the same way, of their own reality as are the rest of us.

But how does the knower know that he really has been in the past time of his own mental life? In other words: How do we become assured

knowers of the continuity of our own existence as a Self? Partly by memory, and partly by reasoning on the basis of our memory and that of other people. I do not surely know that I have existed, as in any sort the same Self from birth or conception, by an act of memory, down to the present hour. I remember with an irresistible distinctness that I *was*, doing this or suffering that, at about such a time; and then again, that I *was* doing or suffering something different at about such another time. There are many points along the line of my entire life which I can mark by the sign of the memory, "I was then and there"; but there is much more of the whole line that I cannot honestly mark by any such sign. Still I can, as we are accustomed expressively to say, think up many an experience of my real life which lies in a seemingly forgotten past; and these experiences which leap or drag themselves unbidden into consciousness, and those which I am able to ferret or coax forth, help vastly to multiply the sign-boards of memory along the path followed by the development of the Self in all its past. Then, too, others have told me what they remember about me, before my recognitive memory had begun to work habitually or had even been formed, and they are almost constantly reminding me of things I had forgotten, — some of which I can now confirm by reviving the memory of them, but others of which I can in no way revive. Thus the line of the real exist-

ence of the Self may be filled out in some such shape as this: I was —— I was —— I was —— I was —— I was —— I was —— I was ——, etc., etc. But never can we fill up the gaps in this line so as to affirm on the authority of either self-consciousness, or recognitive memory or indisputable reasoning: "All the way from the beginning to the end, *I really have been.*"

Such identity as we know ourselves to have, and assume as the basis of all our answers to the question, What do *I* really know? is involved in the self's knowledge of its own reality. That I should remember what I was doing and suffering at so many different times, and not be the same Self, seems to be an intolerable absurdity. One man may indeed remember about another better than that other remembers about himself, — at least in some respects and on some occasions. But how can one Self do the remembering for another Self? We are even unable to picture the question in other than contradictory terms. The old man may ask the younger one whether his own memory of an event which happened in the youth of the latter is not correct. But whether the two reach agreement as to the facts, or continue to differ in their memories of the same event, neither can conceive of the other as performing the act of memory otherwise than — so to say — in his own right. When one mistakes the dream of having done a thing for the valid memory of having really done it, the case with regard to

the *self*-asserting quality of memory is in no respect altered. I am "in some sort" the same person whose experiences I think I truly remember and attribute to myself.

But just as certain as it is that I am "in some sort" the same person I was years ago, just so certain it is that I am "in some sort" a very different person. I am the same Self, but my Self has greatly changed. Indeed, when I began to be, a human infant for others to observe but with little or no development of human mental life, I was not at all a real Self. The very essence of the continuance of the Self's existence as a real mental life, has been the nature of the development which it has undergone. We shall have to say then that the real identity of every Self consists in a certain characteristic development; but that the knowledge of this identity, the assurance of being "in some sort" the same Self all the way through this characteristic development is guaranteed partly by memory and partly by inference. The causes which chiefly account for this self-sameness are inheritance and the habitual reactions established by repeated responses to the changes in environment. In general, these causes secure a fairly consistent type of character for the individual. The peculiar modifications and combinations of those forms of mental capacities and activities which belong to mankind constitute the fundamentally mysterious unity which we call the individual man, *the* person who is

unlike any other person that is, or ever was, or ever will be. And yet to this self-same individual there sometimes come sudden and unexpected changes of conduct and of character, that seem to reach down underneath the very depths of temperament, and tear up by their roots the firmly established habits. Such is the story truthfully told by thousands who have had experience of religious conversion. Whatever we may think of any of the explanations which physical or psychological science is fain to offer, we cannot truthfully deny the claims made by this species of self-knowledge.

Very much the same things are to be said of the knowledge which every man has of his being "in some sort" a unity. Since childhood he has been able to play at being something or somebody which he knew he was not. He has been a horse for another boy to drive, a bear to frighten his younger sister, a leader of a Robin Hood band through the "merrie green wood," or an indescribably fierce bandit on the Western plains. Oftentimes, too, he has been two persons in rapid alternation, or practically at the same time. He has perhaps recognized within himself a good Self and a bad Self; it may be that they two have fiercer battles on the plain of his self-consciousness, than have ever been fought in the field of his imagination between himself as bandit and the mounted police. It even may be that in times of fever "*his mind* has wandered," and

through days and weeks he has been for himself and for others quite a different Self. Should the sad fate of being stricken with paresis, or certain other incurable forms of insanity, fall upon him, he might be for all the remainder of his physical life quite another man. It seems then that the reality of the unity of the Self depends upon the consistency of its development according to some idea; and that the knowledge of this unity is guaranteed by self-consciousness, by memory, and by sound reasoning.

Beyond these conclusions which every man may understand as stating substantially the truth of his own naive and instinctive (?) metaphysics, the most subtle and highly trained metaphysician cannot very far go. Indeed, we should not be far wrong if we said that he could not in substance go beyond them at all, but could only at best bring them more clearly to light and state them in more intelligible terms. The inquirer after a helpful answer to the question, What can I know? may, therefore — not altogether without a certain show of reason — ask: What is the use of reflecting over the real nature of the Self even far enough to recognize the fact that I am a natural metaphysician; much less, to ascertain what are some of the things of a metaphysical character which I ought to be more consciously and fully aware of as indubitable truths? To this question, however sceptically or querulously asked, we are ready and eager to reply.

WORTH OF SELF-KNOWLEDGE

In the first place, the very process of attempting to attain more and clearer self-knowledge is adapted to add no small sum to the real value of the Self. A Self that knows itself is worth more than a Self ignorant — and, especially, carelessly ignorant — of itself. But it is also within any one's power to employ this knowledge of the kind of reality, self-identity, and unity which constitutes the personality of man, as distinguished from the wholly impersonal character of things and the only very partial inchoate mimicry of personality by the lower animals, to one's own inexpressible benefit. For what we have seen by analyzing such naive metaphysics is this startling truth. Different men are real, self-same, and one with themselves, in very different degrees. The degrees of their reality, personal identity, and personal unity, are directly dependent on the character and the degrees of their development. These truths are all recognized in the language of the common people, — in the forms of human speech which so often reveal the truths that are obscured by the technical terms of science, theology, and philosophy. "Be a *real* man"; "Be *more* of a man": such are some of the exhortations in which the metaphysical doctrine of the reality of the Self is unconsciously, but faithfully recognized. "Why! you are not the same man you were twenty years ago" is language which we address either in warning or in compliment to our intimate friend; but, how-

ever addressed, it is pregnant with the most profound significance. Or we say: "Poor fellow, he is totally changed; I saw him in the asylum today; you would not know him at all; he has lost his memory; he does not know his best friends." In such words as these, all recognize the shifting of the limits of personal identity even this side of the condition of the later stages of progressive paresis, where the wretched victim has seemingly lapsed back into a condition in which only the characteristics he shared with the lowest animals or with the plant-life remain of what was once a well-developed personality.

From the ethical point of view, our experiences, and the way we express and talk about them, are even more clearly indicative of what sort of a real unity a human soul may be said to possess. It is so sensitive, so delicate, so susceptible of injury or of destruction. A thing of an infinite number of elementary capacities, infinitely varied by usage and habit, able to rise to heights of self-separation which set it consciously over against the whole of the world, and even in opposition to God; the human soul is nevertheless so often divided and distraught, committed to double life for immoral purposes, and broken into fragments, mere bits of personal or lower forms of life, by the temporary or chronic attacks of disease. And has not modern psychology developed on the basis of observation and experiment a still doubtful and crude, but ambitious and pro-

foundly interesting doctrine of double and triple personality?

Fortunately, however, this view of the "relativity" of the true metaphysical doctrine of the nature of a human soul has a bright and encouraging aspect for every one bent on making the best of his own soul, and willing to learn how this worthy end may be served by increase in self-knowledge. For the growth of the reality, identity, and unity of every person is in a conspicuous way dependent upon that person's own will. It would not, indeed, do to say that every individual may become as much of a person as he really and persistently wishes to be. But within certain limits, which can never be set by any *a priori* reasoning, or form of scientific prediction, some such statement is in a general and loose way, true. The exhortation, therefore, which should accompany all the daily life of every individual who is ambitious, as we are accustomed to say, to "make the most of himself," is warranted and enforced by the metaphysics of the soul's life. One can *will* to be more real, more self-same or more truly an individual in the form of human personality, more truly one, by choosing and following an ideal. Realize progressively the chosen ideal of your own truest and best Self, is for the human will no wholly vain and illusory proposal.

It is obvious, if any such exhortation as that just commended in the name of the metaphysics of the Self is to serve as a rule for practical guid-

ance, it must be carried out with an ever growing experience of what is one's "best Self," its nature and value, and the way to give it the culture which it demands as its divinely ordained right. Its general features are somewhat plainly marked by the experience of the race as that experience is embodied in the principles of art, of morals and of religion; and especially, as it is fully amplified by the best examples under each. But, even when most clearly, only in a general way. For each Self, his own best Self is a quite peculiar affair. And they who say, not flippantly but thoughtfully and modestly, "I do not want to be precisely like any one else," express this laudable ambition in the most laudable way.

From the point of view which we have now reached it appears that the first thing, both in time and in importance, in order that one may gain the self-knowledge of supreme worth, is the discovery of the "better Self." And this, he who looks diligently to find will succeed in finding. For within every normal man such a Self is either growing under cultivation, or may with some rays of sunshine thrown upon it, be made to germinate. One of the most interesting results of the modern experimental investigation of so-called double and triple personality is the confirmation of the fact which is illustrated by all the growth of moral consciousness and ethical theory in the history of the race, — the fact, namely, that the selection and adoption of any one of these

conflicting personalities, by an act of will and a following habit of choice, can in time render this one dominant over all the others. If, then, one will adopt one's own better Self and cultivate the intellectual, emotional, and motor responses, which accord with the ideal thus presented, one will progressively realize the highest values which flow from self-knowledge. The law of such a development of personality as this is, for practical purposes, embodied in the advice: "Obtain and cherish such a knowledge of the peculiarities of temperament, environment (especially on the side of opportunity) and of capacity already gained and habits already formed, as shall best serve for progress toward the attainment of your ideal of personality."

The worth of self-knowledge is further shown, although in a somewhat less direct and obvious way, in the contribution it makes to our knowledge of other men. "The soul of another," says Tourgénieff, "is a darksome forest." The souls of all others are forever shrouded in impenetrable darkness, unless we can light them up with a lamp that is kindled by self-knowledge. It is indeed a kind of sympathy, or an obscured feeling of kinship, which on account of its spontaneous and unanalyzably complex character, we are perhaps warranted in calling "instinctive," that is the most fundamental of the psychical bonds which unite the individuals of any animal species. This is doubtless as true in man's case as it is in

the case of the lower animals. But what it accomplishes for any one can scarcely be called a trustworthy knowledge of human nature. The reverse of what Goethe declared to be true — "Only in man, man knows himself" — is no less true: Only in knowing himself, does one man know other men. Both truths are well united in the German couplet:

"Willst du sich selber erkennen, so sieh wie die Anderen es treiben;
Willst du die anderen verstehn, blick in dein eigenes Herz."

The more complete this self-knowledge is, the more is its value increased, other things being at all equal, as an aid and a guide to the knowledge of our fellow-men. Especially is this true when the application is made to what is *best*, from the intellectual, artistic, moral and religious points of view. It is the boast, often made with a sneer and often made with a leer, of men who have knowledge of themselves too exclusively as selfish and base, that they are in possession of a fund of peculiarly sure and valuable information about men at large. In their judgment, all men are selfish and only selfish; all men have their price. And as for all women; do not those who have had the most profound and varied experience know of a surety that, given the favoring circumstances, not a virtuous one can be found among them all?

Now in truth, no man who has not yet discovered his own better self can have any of that knowledge of others which is most profound

and best worth while. According to the work which one has done in bettering that Self is one's capacity and success in helping others to discover and improve their better selves. To hold this conviction, and to practise in accordance with it does not imply a lack of scientific knowledge of "what is in man" or an excess of unreasoning sentimentality. The facts of experience on which the recognition of the so-called "higher" and as well of the so-called "lower" nature of man is founded, and of the conditions and laws on which the growth of the former into the place of power and of control is dependent, are as well to be ascertained and studied as are any psychological facts and laws. In this way the increased value of self-knowledge, as essential to normal and sound knowledge of human nature, is established scientifically, both in theory and in practice.

Not least of all the considerations for the man who wishes to make of his knowledge a useful and effective instrument for achieving success in the practical issues of life, is the worth of self-knowledge from this point of view. By this kind of self-knowledge, and by it alone, a man learns how to estimate his capacity, and how to increase that capacity for any particular kind of work. "Do you know how to handle yourself?" is the equivalent of asking: "Do you really know how to do the particular work well which it behooves you to do?" There is no more important practical difference than that between the man who

can say truly, "I know what I can do and what I can not do," and the man who is habitually unsuccessful and not infrequently asinine in action, because he has never taken pains to learn his own aptitudes and limitations.

One word is now in place as addressed to the criticism of all self-knowledge, because it is so sure to be obscured or rendered quite illusory by the various forms of prejudice toward themselves in which all would-be self-knowers are tempted to indulge. Self-conceit, excessive self-depreciation, a shrinking cowardice in view of attempting any duty that seems sure to test to the utmost our ability, or a rash ambition to attempt tasks for which there is a morbid appetite but no corresponding power of assimilation, — such are a few of the many forms of self-prejudice which some would try to make us believe must vitiate all the most honest attempts at reaching truth by the avenue of self-knowledge.

"O wad some power the giftie gie us,
To see oursels as ithers see us."

What motto is more frequently and aptly quoted than this? We notice, however, that the quotation is usually directed against some one person by another person whom the latter assumes to have an incorrect — and generally a self-conceited — estimate of his own capacity or attainments. It is seldom, I believe, used as a prayer by those who are sincerely striving to know themselves, on all sides, thoroughly and truthfully. Now

the fact is that he who does persistently strive for self-knowledge in the right way, will come to know himself far more completely and correctly than any other human being can know him. No knowledge of the real nature of the individual, except God's knowledge of him, will be at all comparable to that which the individual may attain of himself. This is one of its more important claims to value.

The way of self-knowledge is by no means so narrow and restricted as it sometimes has been supposed to be. So far has the disparagement of introspection as a medium of self-knowledge gone among a certain class of psychologists that an effort has been made to dispense with it altogether in the experimental study of mind. There are even a foolish few who would throw out of the psychological vocabulary the concept of "self-consciousness" itself and rely wholly in the study of mental (?) life upon the character of the motor reactions. Though how one puppet which is pulled wholly by strings from behind the vail can interpret or express the movements of another puppet in like manner manipulated, otherwise than in terms derived by introspection from his own experience, it seems quite impossible even to imagine.

The method of reaching the truth about one's self by processes of self-reflection, like every other method, has its benefits and its limitations and disadvantages. With respect to the healing of

wounds and the removal of excrescences, it is like the probe, the saw, the knife, in the hands of the surgeon; the results depend not only on the condition of the patient's organism but even more upon the skill and judiciousness of the operator. This method which we call "introspection," or the inward look, has its dangers and its deficiencies. But for all that, it is the absolutely indispensable organ of all attempts at accurate and complete self-knowledge.

On asking a friend who had spent his entire life in close personal relations with the Chinese, if he had as yet come to understand this, to me, most incomprehensible of all species of human nature, he replied with a general denial of his ability. He added, however, that his experience had led him to this formula: Never believe a Chinese to be really so good as he seems; but then, never believe a Chinese to be really so bad as he seems. For what reason? Because there is always a "*clan*-consciousness," or an only dimly conscious "*clan*-feeling," or a wholly unconscious "*clan*-instinct," which constitutes the chief real explanation of the individual's conduct. Individuality, in its highest form of developed personality, has not been attained as a general characteristic of this race. But after all, such a characterization does not remove this race, or the most characteristic example to be selected from this race, out of the category of humanity. The same group of "controls" is powerfully

influential, if not dominant, in the development of personality for every individual man. Now the necessity and the value of the employment of reflection to the end of more and more accurate self-knowledge, is largely connected with the discovery and selection of this class of controls. For the development of personality in its higher and worthier forms, there must be a control of controls. And this superior control, or group of judgments and emotions, which must — so to say — be put at the disposal of the will in the pursuit of the personal ideal, as well as that ideal itself, cannot be discovered and cherished without self-reflection. There is no path toward the attainment of a more worthy Self, no road to the realization of a worthy selfhood, that does not need light from the eye of introspection.

On the other hand, there are morbid and even insane forms of self-reflection, dangerous and even fatal excesses of self-examination. Such are those followed by many a Yogi, Omphalopsychist devotee of health-cure or mind-cure, as well as monk or nun in all of the so-called greater religions. Simon Stylites, with all the years he spent on his pillar, having little else to do than think of himself, did not in that way acquire a valuable fund of sound self-knowledge. Even the leader of the theosophic Hindûs, and their most distinguished opponent, the Ascetic Rajah of Benares, both of whom devoted themselves to lives of contemplation, could not arrive at an

agreement as to the nature, functions, and trustworthiness of the Self when acquiring in this seemingly most direct and sun-clear fashion, a knowledge of itself. But all this does not amount to a half-convincing reason against all use whatever of the method of reflection in gaining self-knowledge. And even if it did amount to perfectly convincing proof of the inevitable evils of this method, it would have little influence in practice upon the inevitableness of the method. With the present tendencies theoretically and practically to depreciate any self-examination, and the declining use of it as a valuable moral and religious discipline, we think it high time to encourage rather than further to discourage the use of reflection as a means of worthier self-knowledge. The American public, in our judgment, most sorely needs more seriously and steadily to look inward; and in that way to discover some clues to the answer to such questions as, What really am I? How may I become more real? and, What is my probable destiny?

By a mingling of the introspective method with other methods it is possible to give more of an "objective" character to the knowledge of Self. Our past seeming successes and our past seeming failures constitute a kind of judgment as to what we really have been, and as to the direction in which our self-development has been flowing. In some sort we can school ourselves to take a look at these experiences and at the causes, so

far as they lay in ourselves, which determined them. A certain species of objectivity may in this way be given to the conclusions of self-examination. It is now not all pure *intro*-spection; it is partly a looking at deeds as the results of actions irrespective of who the actor may have been. No matter who the author of the drama, and whether it be mainly comedy or mainly tragedy, let us look at it as a drama merely. But even in this case, we are still looking at *seeming* successes and *seeming* failures; and we have a right to ask ourselves, Were they *really* such? Who that does not know, as we alone may know by self-consciousness and memory, what were the motives which excited, the principles that controlled, and the ideals that attracted, the Self all the way through, can decide as to the reality of those successes and those failures? In the light of that personal ideal which we have discovered and are cherishing, many of our successes may seem more than half failures and some of our worst failures may seem our greatest successes.

Yet more claims to objectivity may be shown for that method of self-knowledge which aims to take the estimate of others as to our self and convert it into self-knowledge. But the usefulness of this in itself highly commendable means of increasing the knowledge of what we ourselves really are, has two formidable obstacles. The first of these is the difficulty of finding out what that estimate really is. The value of seeing

"oursels as ithers see us" is much lowered by the obstacles which block the way to the discovery of how these "ithers" do actually see us. Our most sympathetic and intimate and judicious friends have on the whole the most trustworthy outside knowledge of us; but they may be the least likely to communicate that knowledge in a manner to confirm or to correct our self-knowledge. They do not like to be suspected of flattery by calling our attention to our good points; they shrink from the charge of ingratitude and secret enmity by bringing into the "lime-light" our most disagreeable eccentricities or more grievous faults. However, by close watching we may perhaps obtain no little trustworthy information about matters concerning which there seems to be some general agreement among our acquaintances. In the most favorable cases, gentle persuasion and intimately sweet converse may succeed in eliciting their very deepest thoughts and clearest convictions as to the complex of good and bad which, as they believe, distinguishes us as individuals from other persons.

But when we have obtained that vision of us which others in a position to see most clearly have attained, how shall we convert it into clear insight reaching the recesses and the dark corners of our own Self? For this evidence, like every other form of evidence which we try to consider most "objective," is sure to be met by the same "subjective" impressions and prejudices.

Whether it is the reflection of the face in the mirror of self-consciousness, or the portrait of the same face as constructed by this or that artist according to this or that school of art, we have only one pair of eyes through which to view it critically. These eyes may be jaundiced, or astigmatic, or near-sighted, or dim with much looking at the same object in the brilliant lights supplied by the spirits of self-conceit. How then shall they avoid the limits set by this peculiar form of subjective influences? The values of things, one may come to regard with much of general indifference; the higher worth of other selves may not trouble one's own Self overmuch; but that particular Self which one most really is, can scarcely be deemed by itself to be a matter of little or no concernment. All this, however, need not make one despair of using to some good purpose such a difficult means of securing self-knowledge on the most available objective grounds. Have we not already learned that all knowledge is a matter of degrees depending on critical self-activity for its progress from lower to higher? Conviction, or "subjective sufficiency," can be backed up by certainty, or "objective sufficiency," in essentially only one way.

In the pious days of our boyhood, parents used to tell their children more often than is now customary: "Remember that God sees you." So vividly sensuous was the anthropomorphism which responded to this exhortation that the

dark closet, in which by being shut up the child was sometimes punished, seemed all alight with the piercing divine eye. To that insight which was pictured as without, the inward-looking eye of moral consciousness was often most prompt to respond. In adult development, the question, What does God think of me? was expected to decide the question, What am I to think of myself? Such self-examination from the too exclusively religious point of view, or perhaps rather we ought to say, from a point of view quite too much dominated by a now half-obsolete theology, often became morbid and really embarrassing to the soul's truest and best self-knowledge and self-development. It has been charged, on grounds of sufficient evidence and yet with much exaggeration, of being a prime source of filling the homes and the insane asylums with religious melancholiacs.

But there is essentially involved in this question, What does God think of me? the best and practically most efficient test of the trust-worthiness and worth of all self-knowledge. For the essence of the question is just this. It is a proposal to bring the individual Self which I call me or mine, into close-fitting comparison with my ideal of the highest and worthiest possible Self. This is precisely what we found to be indispensable for the truest self-knowledge. In the light of that question many a man has discovered himself to himself, both as to what he is and what

he ought to be. In general, self-knowledge cannot dispense with self-criticism in the light of the ideal. Only as one has some picture of that ideal is it possible for one to understand profoundly one's fellow men. For that very common nature which we are obliged to recognize in others in order that we may meet them on common ground of reason, and of artistic appreciation, and of social and religious communion, largely consists in the recognition given by all to the incomparable worth of this personal ideal. In no other bond are men more intimately and universally tied together than in that which is woven by their interest in, and appreciation of, this ideal. We may then expand the exhortation of the ancient oracle: Know thy present real Self by comparison with the ideal of thy yet better and truer Self, as seen from the divine point of view.

CHAPTER VIII

AGNOSTICS AND PEOPLE OF COMMON-SENSE

IT has long been customary to divide men somewhat roughly into classes according to their theoretical or practical attitude toward the problem of knowledge. In arranging these classes different principles of division have, of course, been proposed and adopted. Thus we hear spoken of, men of faith and men of intellect; men who divine truth intuitively and men who reach their conclusions only by the path of scientific experimentation, testing the steps cautiously all along the way; men who are eminently practical in all their attitudes toward all subjects of knowledge and men who incline to be speculative or even visionary. It is pretty generally agreed by the students of the development of knowledge in the race at large that "Nature" has made good use of all these different classes of knowers; indeed, that the development which mankind has already attained could not have been equalled, if it had been necessary to dispense with any one of them. It might seem to follow logically from this that all these kinds of knowers and all these ways of knowing have something to be said on

their side. When we come to the topmost heights of the speculative efforts of the mind, to philosophy, we find a mighty number of so-called "schools," which it is customary for the historians of this branch of development to set in contrast, or even in violent opposition to one another. There are, for example, idealists who are opposed to realists, empiricists who are opposed to *a priorists*, rationalists who are opposed to — irrationalists (?). No, to — pragmatists, and eclectics or thinkers who try to discern the truth that is in every system and so have all the partisans of every other system or lack of system opposed to them. All these prominent schools break up into subdivisions which more or less fraternize or wrangle with one another. Thus we have the Scottish realism and the neo-realism which, curiously enough, is a sort of offshoot of a new empiricism that is the quite complete opposite of the older form of realism. And when we compare the theoretical and speculative side of the positive sciences, the contending classes of knowers are scarcely less numerous. No wonder, then, that so many resort to the extreme of agnosticism or to the other extreme of just settling down on the hardpan of common-sense. In the one case, the knower says, "There are no foundations whatever for truth about what is real"; in the other case he affirms: "Everybody who has the judgments which are common to all men may know all that is worth knowing about what is real."

That the popular mind sets the agnostics away over on one side and the so-called people of common-sense away over on the opposite side is a matter obvious enough to the insight of the average observer. But some analysis of both the positions assumed by these two kinds of knowers shows that neither of them can maintain its own extreme; and that the important truths emphasized by each may well keep them standing not so very far apart in the middle ground between the extremes of both. An analysis of any of the other extremes of the attitude toward the problem of knowledge, to which reference was made above, would illustrate the same welcome truth. There are no idealists who do not actually build on some foundation in reality. There is no scientific or philosophical school, old or new, that is not virtually some attempt at a system of idealism. As a distinguished student and veteran teacher of science has recently said: "Since, then, our intellectual action finds physical expression in nature, and not only reason but imagination is found to be an aid in physical investigation, I would define science as *the verification of the ideal in nature.*" The more extreme and tending to the abuse of rationalism the pragmatist becomes, the more frantically does he resort to rationalistic methods in his attempted proof of this extreme. And the neo-realist is chiefly distinguished from the advocate of the older form of realism by his knowledge of the terms and the facts discovered

by the physical sciences, and by his neglect or scorning of other classes of facts which were most precious of all in the sight of his ancestors who bore the family name.

But the popular contrast or opposition between agnosticism and common-sense has been chosen to illustrate our contention, for these two reasons. In the first place, this particular case admits of easy illustration; in the second place, this particular contrast is more closely allied than are most of the others to the problem we are considering, the problem of knowledge.

Let us then at once state the truth to which the opposition of agnosticism and common-sense points the way directly. The extremes of agnosticism lead to absurdity; the extremes of the common-sense theory of knowledge revert to the childish, the infantile view of man and the universe in which he lives and of which he is a part. But no man can reach the satisfactory answer to the question, What can I know? who is not consciously and confessedly agnostic about innumerable things, and who does not also build his knowledge broadly and frankly upon data derived from that field of experiences in which *all* men, because they are *men*, have a "common" share. To know much, one must be both an agnostic and a man of common-sense. Indeed, we might say, that to know anything whatever, a man must be a bit of both.

In one of his *Essays* Professor Huxley tells us

that since most of his colleagues in the Metaphysical Society were some sort of an "ist," while he wished to be known as a "man without a rag of a label," he invented the term *Agnostic* as peculiarly appropriate to himself. But Professor Huxley was a distinguished and avowed evolution*ist*, and there is no other kind of an "ist" who requires to know more of what has actually gone on in the real world than any kind, of the now many existing kinds, of evolutionists. At the same time there is no kind of an avowed knower who has greater need of a modest and generous agnosticism about the special things which he claims to know. And when Professor Huxley frankly published his retraction of what he once thought he knew as to the biological character of the *Urschleim*, he exhibited his character as a man by a morally worthy kind of agnosticism. Much of the agnosticism of the modern era has attempted to go to the lengths of the ancient scepticism of the advanced Greek school; or perhaps it would be truer to say, up to the limits of the Oriental theory of Māyā, — the world and the heavens and "all that in them is," is only a dream, is impure or mixed and vaporous illusion.

But as I have said elsewhere (Knowledge, Life, and Reality, p. 147): "If the agnostic, with reference to the fundamental beliefs and reasoned conclusions of this larger experience (that of the race, the fruits of the knowing of men at large)

avows not only the maxim 'I-do-not-now-know' but also 'You do not know' and 'Nobody knows, or ever will know, or from the nature of things can know,' then he is no longer merely agnostic, but has become the most conceited and irrational of dogmatists. He has taken the liberty to transcend his own particular and limited experience in order to deny the abstract possibility of such a transcending, on his own part, and on the part of all others. But how does he even dare to assume that there are other selves with whom he may argue the case by an appeal to their common reason; or other things about the existence and doings of which the argument may become, as it were a valid transaction?"

As a matter of historical fact, avowed agnostics with regard to all the metaphysical truths which are assumed to interpret and explain the experience of humanity, whether in the form of alleged knowledge or beliefs or practical faiths or hopes and aspirations, and whether in the realms of art, or morality, or religion, are not infrequently the boldest of metaphysical theorists when they can build upon the facts of their favorite among the chemical, physical, or biological sciences. Metaphysics, in the form of a lot of unanalyzed or half-conscious assumptions, or of some more elaborate and systematic sort, is the constant accompaniment of all growth in knowledge. Metaphysical faith is the indispensable support, as well as the irresistible conclusion, of each and

every act of knowing. That thing over there — chair, table, crawling worm or speeding horse or swiftly moving locomotive, that sun in the heavens, or wandering planet, or fixed star — is something real: the changes it undergoes are actual: and for its existence in reality and the actuality of its changes, it is not dependent upon its being known by me or by any other human mind. Such is the verdict of common-sense; and no form of scepticism or agnosticism can successfully controvert or abate the convictions in which such naive metaphysics has its ground. Nor is the outfit of the qualities or modes of influence which any particular thing exerts on other things to be exhausted by enumerating those particular qualities which it reveals to me and to other minds, when, as we are wont to say, we know it for what it *really is*. Only as it does reveal itself to me, can I know anything about what it really is. But the qualities which it shows to me are really its own; in showing them to me it is active as truly as I am active in apprehending these qualities. Such, when translated in a somewhat figurative way, is also the verdict of common-sense. But much further than this we cannot go in our metaphysics, while making an irresistible appeal to the authority of the uncritical mind.

The agnosticism which attempts to justify its own extreme conclusions by a consistent course of argument, ordinarily starts from one of two similar but not quite identical points of view.

In somewhat technical language, they are "solipsistic idealism" and the fact of the "relativity of all human knowledge." Let us examine very briefly each one of these courses of argument and see how it ends in absurdity and suicide. In the use of both courses of argument it is customary to begin with a general denunciation of metaphysics. To put this denunciation into the facetiously captivating words of another: "Metaphysics is that of which those who listen understand nothing, and which he who speaks does not himself understand." But the unescapable need of *some* metaphysics has been sufficiently illustrated.

All that I know, says so-called "solipsistic idealism," is my own ideas. To be sure, they appear to me as, at least in a partial way, representative of a real world outside of me. But how guarantee this representation? Only by other ideas; the reality, the "noumenon," the thing-in-itself, *that* I never seem to be able to reach. To assure me even that it is, I have only certain modifications of my sensations and a feeling of effort which I attribute to something resisting my will. But sensations and feelings of effort and even the inferences which attribute them for their origin to a reality outside of me, are themselves only certain forms of my ideas. And even if I admit the argument which claims that something *not-me* really is, I can have no definition of what that something is, except through the

doubtful source of my idea. Hence the irresistible conclusion: "My state of consciousness, that is all the reality." Or if we take memory to our confidence, we may enlarge the answer and include as having been in some sort real, the fragmentary "stream of consciousness" which I call myself.

Now how false and inadequate is the conception of knowledge which is held by this sceptical idealism, with its agnostic conclusion, we have already seen; and more will be said on this point later on. But at present we will confine ourselves to tracking it along its own path of logical reasoning.

I propose to argue that nothing really exists, at least as it is supposed by my ideas to exist, outside of my own ideas. But what is this real existence which is presupposed in the very proposal to argue? I am going to argue. But with whom, and about what, am I proposing to argue? The proposal is not to rush like a wild animal, smitten with the madness of complete isolation, into some impenetrable forest or up to some lonely mountain top, and there bellow or shriek forth my pain. A proposal to argue is a proposal to be reasonable. But one can not be reasonable, by way of reasoning, when the subject in debate is the existence of other realities than the Self, without admitting the reality of other reasoning selves. In a word, all use of reason irresistibly involves the being in reality of a common reason.

However much one mind differs from the majority of other minds, — or even if it supposes itself to differ in the most radical way, as respects its opinions, from all other minds, — it cannot describe, or interpret, or explain, or argue about, any thing or any event, without assuming the reality of the existence, and the actuality of the doings, of rational beings other than itself.

But now, how are these other rational beings, my *fellow* men, made indubitably known to me? It is as things that move about in space and produce effects in my train of ideas through physical means. Forever and forever, and the more of a sceptic he becomes, the more does every other man remain an outside thing to the sceptical man. It is only sympathetic interpretation that lets any other Self "under the jacket" with my Self.

It follows from what has just been said that all the social life of humanity is based on foundations that can never be disturbed by this form of the extremes of agnosticism. To it, not the common-sense alone, but all the common life and historic development of the race is an unanswerable refutation. For as a writer who is a critic of "phenomenism" form the point of view of an avowedly non-metaphysical but virtually materialistic theory of parallelism, has declared in a very lively way: The mind will not tolerate, on grounds of feeling, the logical conclusions of this kind of scepticism when it is applied to

persons. After admitting that he would be willing to dispense with the reality of all the physical world, including the reality of the very bread he eats, if only the idea of eating bread were regularly followed by the idea of being no longer hungry and of being invigorated, this rejector of every form of metaphysics, flops over the fence between ideas and reality on the wings of natural affection. "To admit," says M. Flournoy, "that my wife, my children, all humanity, past, present, and future, are only diverse groups of my sensations and ideas — that no sentiment of love or hate exists outside of those which I directly experience, — that there are no other *egos* than my own, — that I alone, with my actual memories or hopes, comprise all reality, — brrr!, the bare idea of this solitude gives me a chill in the spine: and I am not astonished that all the phenomenist philosophers are in fact, unfaithful to their system."

By extending the same line of argument it is not difficult to show that the most extravagant form of agnosticism with regard to the essential nature of real things, serves and always has served, for some current metaphysical theory of reality. At the present time, all the theories of every form of the positive sciences, — those of nature and those of man, if the latter are to be called "positive," — accept in good faith the reality of the *evolution* hypothesis. Either all human science is a dream, and such a dream that no one dreamer

can wake up enough actually to communicate his dream to other dreamers when they chance to be awake; or else the theory of evolution must be held in general to be valid for a real world and for actual transactions in it. But this is equivalent to making it metaphysical. Thus it appears that complete agnosticism, when it sets out from this point of view on a course of argument, ends by throwing itself into a bottomless pit and dragging after it all common-sense and all scientific knowledge.

The other point of view from which the argument to an all-embracing scepticism sets forth may be called the fact of the relativity of all knowledge. That all knowledge, inasmuch as to be established and communicable it must take the form of knowledge-judgments, must come under the principle of relativity, when properly stated, cannot be disputed. From the psychological point of view, all judging is relating: from the metaphysical point of view, only things and other selves as related to us can possibly be known to us. To know is to relate: to be known is to be related. In the light of this fundamental fact, all theories of the nature, the degrees, the limits, the guaranties, and the warrantable assumptions, of all human knowledge must be understood. In this meaning of the words, man is indeed "the measure of all things; of that which it is, how it is: of that which is not, how it is not." Out of this general fact must come also the

distinctions that are made between truth and error, and all the doctrine of the means of distinguishing between truth and error. Thus much with regard to the relativity of all human knowledge, and the justifiable kind of agnosticism which results from it, has already been frequently admitted and sufficiently explained. But when this course of reasoning is pressed to the conclusion that no truth that has the guaranty of a knowledge of reality can reach the human mind; that distinctions between truth and error are all of only logical importance; or even when the theory of Pragmatism is carried to its consistent end and all knowledge is reduced to the phenomenal in the interest of so-called practical issues; then there takes place such an undermining of the natural and essential self-confidence of each reason, as corresponding to the reason manifested in other selves and in things, that the sword with which to commit *hara-kiri* is forced upon reason itself.

But if no one can reasonably go the lengths of the agnosticism which is born of so thorough and logically consistent scepticism, it is equally true that no one can honestly and wisely refrain from the position of the agnostic with reference to the vaster number of opinions, beliefs, and even scientific statements, which come before him day after day. There is not one in a hundred of these new opinions, beliefs, scientific statements, which the average man could convert into trustworthy and sufficiently certain knowledge, even

if he were to neglect all his daily round of duties and give himself exclusively to the impossible task. To attempt to know everything that other men know or opine, is pretty much to destroy all one's chance of knowing any thing thoroughly and well. More or less doubtful opinions is all it is well to strive for with regard to many of them; others of them — probably a still larger number — need not to be allowed to stick in the mind over night.

Some things, however, we must know as thoroughly and surely as it is possible for us to know them. But even in regard to these we must be satisfied to know only very partially. Many aspects of the things we know most surely, we must, and all men must, be content to be agnostic about. No single thing, so unimportant in the universal scheme of things, really exists, and no event, however lacking in seeming complexity, actually happens, that either thing or event can be searched through by the most cunningly devised mechanism or fully comprehended by the human mind. No mystery invented by pictorial imagination or the dramatic art equals the mystery that underlies and is immanent in the commonest surroundings of our daily life. All explanatory science leads promptly and unavoidably to fundamental facts and laws that baffle and block our acutest intellects and most lofty flights of speculation. The law of gravitation is as mysterious as is the exceptional behavior of

Groombridge 1830 in apparent contravention of that law. The expanding of water at just the degree of 32 Fahr. is actually no more an incomprehensible puzzle than is its contraction all the way from 212 Fahr. down to that degree, under the influences which our senses appreciate, objectively by motion, subjectively by feeling cold.

In this connection the benefits of doubt, of the sceptical and agnostic attitudes of mind, as indispensable for the advance and verification of every kind of human knowledge, deserve to be made emphatic. The truly pious man may well say, whether from the scientific or the religious point of view: "Thank God that we are forced to doubt and to find our way to truth through doubt."

> "It is man's privilege to doubt,
> If so be that from doubt at length,
> Truth may stand forth unmoved of change."

It is indeed hard for the man of settled convictions, especially with regard to those matters of social, moral and religious import, which attach themselves to value-judgments, in the faithful application of which to the conduct of life, all the most precious and inviolable interests of the individual and of the race are inextricably involved, — it is hard for such a man to have such convictions attacked and the evidence on which he has once for all securely reposed them shaken to its very foundations; or so violently that the whole superstructure based upon them seems tot-

tling to its fall. But no man who has asked and answered for himself the question, What can I know? will long fail to remind himself of the thought that fidelity to the truth, and confidence in the practical outcome of such fidelity, is an obligation superior to the persistent clinging to special opinions which are being rendered more doubtful the more we weigh the evidence alleged in their behalf. At the same time he will not fail also to remember that there are certain convictions, and these of the loftiest and most "feeling-full" character, which have survived and risen clearer and brighter, after enduring ages of repeated attacks from scepticism and doubt.

The insufficiency and errors of the extremes to which the men of so-called common-sense frequently resort are much easier to point out and to refute than are those reached by excessive agnosticism on its way to a suicidal end. Common-sense must be trusted, and virtually is trusted, for its inviolable and undiminished confidence in the existence of a real world, full of actual events, some of which are known to be causally connected; and as well, in its confident belief that, while human knowledge does not create that world and knows it at best only very imperfectly and partially, it does know it *truly*, so to say, — that is, as it really exists and actually behaves. But for all this, common-sense too often trusts the naive and uncritical evidence of the senses, as though all the values of the real world were ready

to yield themselves to the senses of the common man. When it is confronted with the contradictions which reality opposes to the senses, or with the mysteries revealed by science and speculative thinking, if it does not remain stupid, it, too, turns sceptical. Why cannot science and philosophy let the world alone, "leave it be," just as common-sense finds it! — somewhat like this is the peevish question which is apt to arise in the mind that has gone too far and stuck too fast in this general direction. Hence the amusing contempt for science and metaphysics on which the men of just plain common-sense proudly rely in their treatment of matters political, social, moral and religious.

Common-sense unmodified is apt "to take little stock" in things invisible, and in the spiritual ideals that allure and control the artistic, moral and religious development of mankind. Even if such an one tries to lead a respectably good life in conformity with rules as to the really binding force of which he has no disposition to investigate; or if he becomes respectably religious enough to seek admission into a church or even get elected an officer in it; even so, the loftier ambitions, and finer dreams, and more passionate devotions, and grander and surer hopes of humanity seem to him fit to be discouraged as devoid of common sense. If he is a farmer, he conceals his money in a stocking or puts it in the savings bank rather than invest it in an improved breed of sheep.

If he is a manufacturer, he delays introducing the latest improvements in machinery until he has been distanced by all his competitors. He clings to the old party and refuses to modify its policy to meet new conditions, until the party is reduced from majority control to a handful of hopeless minority. In morals, he is intolerant of new views and practices; in religion, he will have nothing to do with new-fangled rituals or theologies. He stays firmly planted in the mud of his common-sense, until the river at the flood-time of change, brings enough earth, wreckage, and other debris, down from the mountains that rise toward dreamland, with which inextricably to bury him.

But shall we, as would-be rational men, flee from the stolid agnosticism caused by an excessive confidence in our own common-sense to that subtler and more captivating form of agnosticism, already described, which is bred of an over-refined idealism or a misinterpretation of the principle of the relativity of all human knowledge? By no means, if we wish to answer in a manner theoretically satisfactory and practically safe, our main inquiry: What can I know?

From the very beginning of the discussion down to the present moment we have steadfastly refused "to pour out the child with the bath." The child is knowledge, growing in the main vigorously toward a larger life but needing, at least once a day, a vigorous scrubbing and no

soft sponging with perfumed water. The extreme agnostic, being tired and disgusted with this daily task, is ready to "pour out the child." The extreme devotee of common-sense is fain to preserve the water of the bath at risk to the health of the child. But only the immature Paracelsus dare say:

> "I saw no cause why man
> Should not stand all-sufficient even now."

Grown more mature and so more wise, the philosophic student of human nature must recognize the inevitableness of man's slow and halting development, both in knowledge and in power. For humanity, as conditioned on the essential characteristics of human nature, progress must always be —

> "Power neither put forth blindly, nor controlled
> Calmly by perfect knowledge; to be used
> At risk, inspired or checked by hope and fear:
> Knowledge — not intuition, but the slow
> Uncertain fruit of an enhancing toil,
> Strengthened by love."

This mediating position makes the description of the lines which separate truth and error still more important as a part of the answer required for a useful solution of the problem of knowledge. But any general rule or formula for making infallible distinctions between truth and error is absolutely, and from the very nature of the case, impossible either to discover or to suggest.

In addition to what has already been said, though somewhat indirectly, on this subject, a

few remarks are in place at the present time. The sifting of the Truth out of the gross mass of Error, or, should one wish to turn about the figure of speech, the washing away of the Error from the golden grains of Truth, is a task always to hand for the mind of the individual and for the mental holdings of the entire race. For this process the dictum of Mr. Spencer in his attempt to found a pretty thorough doctrine of nescience, may serve as an available point of starting. "There is a soul of truth in things erroneous," declared Mr. Spencer. This is to say that truth and error are so mixed in human judgments, opinions, beliefs, convictions, and what not, as to make a process of separation necessary if we would get at either in what might be called its "pure form." Now granting this, the most important preliminary is to determine which of the two we are chiefly interested in discovering. Do we want to get the truth out of the admixture of error in order that we may give our confidence and devotion to it and to its use? Or are we chiefly eager to discern the error, in order to hold it up for rejection and repression, or perhaps for the glorification of our own personal insight and intellectual acumen? Sometimes, with the most conscientious inquirer after truth it may be the one motive which is dominant, sometimes the other. But in general he who will know the truth, and win it for himself away from the dross of error, must present a genial rather than a repul-

sive side toward, not only the achievements of science and the conclusions of the best speculative thinking, but also toward the common knowledges, opinions, and beliefs of men. There is a "soul of truth" in them all; but this truth demands a sympathetic and appreciative human soul to come into communion with it. In general, the chief benefactors of the intellectual development of the race have been those who have quietly discovered and faithfully revealed the new truths, rather than those who have been chiefly concerned in uncovering and denouncing the old errors.

This work of winning the soul of truth out of things erroneous requires a different method according to the nature of the truth which it is sought to win. In order to illustrate this we must recall the statement that by *Truth* all men naturally and properly understand such a knowledge-judgment as corresponds to really existing things and actually occurring events. This understanding assumes the possibility of correlating knowledge and reality. The resulting judgment, whether it take a strictly logical and grammatical form or be left only in the form of a belief or conviction, is *true*. By Error men understand such a judgment as lacks this correspondence. But to declare with Mr. Bradley that "Any categorical judgment must be false," because "The subject and the predicate in the end cannot either be the other," is wholly to misinterpret

the meaning of a judgment and the nature of human knowledge. No man of common-sense supposes for a moment that in stating the truth about any thing or any event he is proclaiming a strict identity of "being" between the two ends of his judgment, — the subject and the predicate. I do not assert an ontological identity between horse and blackness, when I say, "That horse over there is black;" or a sameness of being between abstract sweetness and the concept sugar when I make solemn proclamation: "The sugar we get now-a-days does not seem to me so sweet as it used to be." When the common-sense man reads such agnostic statements made on the ground of an absolute separation between "Appearance and Reality," he is apt to say: "A plague take all logical illusions: for are they not far worse than any of the illusions of sense to which I may, in unguarded moments, be subject."

In order to understand how to separate between truth and error in matters where the testimony of the senses must be evoked to decide between the two, it is necessary to recall the essential nature of the knowledge gained by the senses. All of such truth to which the individual can testify in an unqualified way amounts to this: "So the thing or the event *seems* now, or so I remember it to have *seemed, to me.*" All the whole race of scientific observers can say about the truth of any affair of the senses amounts only to this: "So, under such or such conditions, to

normal unaided eyes or to such eyes when equipped with this or that kind of instrumentation (and similar judgments when the senses other than sight are brought into play) do these and the other similar things and events, quite regularly appear to be." In all this realm of truth, the *truth is in the appearance.* The reality is truthfully known only as manifesting itself to human sense in all these varying and minutely differentiated ways to different observers. This is what every thing really is, so far as its reality is known or knowable by the senses. Error comes in when some man of common-sense, through inattention or some selfish motive, reports his findings wrong, or makes the mistake of assuming them as in accordance, as it were of necessity, with the more attentive, cautious, and better-equipped observer of the same things and the same events. But error abounds also in the reports of the scientists as to the truths to which their senses give a satisfactory support. They, too, are subject to the same influences which mix error and illusion with the truth of reality as this truth is given through the senses to the race of men.

It follows that the best way to get at those truths which rest upon what the psychologists call "sense-perception," or to form knowledge-judgments whose subjective convictions may win a correspondingly sufficient "objective certainty," is to take the evidence of the senses for what they are worth, and for only what they are worth.

The senses do indeed give us truth about the real; but only on the side of the real which in infinitely varied ways, under innumerable changing conditions, reveals itself to a certain side of man. This side of man is also undergoing certain changes in its development which give new conditions and new opportunities for nature to make known what it really is. But it is chiefly by the ingenious contrivances which the advancing intellectual achievement of the race has secured, — such as the telescope, the microscope, the spectroscope, the photographic plate, the reacting agent, etc., — that man through his senses is coming to see the world as it really is, in a broader, profounder, and more accurate way.

In all this winning of the soul of truth from things erroneous the senses do not act apart so as to afford any standing-ground for distinguishing what we seek from the error with which it is so intermingled. There is, of course, no sense-perception without intellectual activity. Inference enters into the very bones and life-blood of all knowledge. To say, I will claim to know nothing that I cannot prove by the senses, is equivalent to saying, I will not claim to know anything. The simplest and lowest act or kind of knowledge by the senses involves interpretation. *Meaning*, put by the intellect into the data of sense, is an essential of all knowing activity. To distinguish truth from error, then, involves the critical use of the thinking faculty in man.

This may take the form of devising means for submitting the hypotheses already framed, or the conclusions already reached, to experimental testing anew; or in the large number of cases where such testing is impossible, to the process of thinking the thing through so as to bring it into harmony with our other experiences, — a process which has already been sufficiently described and commended. That one must learn to think aright in order to separate truth from error is so much of a commonplace that its statement needs to take on no elaborate and technical form.

It is well to remind ourselves, however, that separating truth from error in matters pertaining to real existences and to the conduct of life is very different from doing mathematical sums correctly, or, when they have been done wrong the first time, doing them over again in order to find where the mistakes have been made. Reality is not constructed "on the square"; nor does it resemble a perfect circle in its behavior or its development. Much less even is it possible to lay down rules resembling those of pure mathematics for the solution of problems of the practical life. Only unwearied diligence, perfect honesty, and the use of all the means available for us as individuals, will enable us in a fair degree to pick up the grains of the pure gold of truth as they shine through the muddy waters of error which we succeed in washing away. But one may become sufficiently rich even by placer mining.

With this thought we may return to the point of view from which "looms large" the dependence of knowledge on character. He that *wills* to know the truth will win most of it; he who makes best use of the truth he knows, for the clarifying of intellect and the improvement of character, will make most progress in accumulating additional stores of truth. All of which is especially patent and sure to be experienced, when the kind of truth one is seeking consists in the "value-judgments" that constitute the body of the doctrines and beliefs of morals and religion. About these, let no seeker for truth be too sceptical or agnostic, or too proudly confident in his own unaided common-sense.

CHAPTER IX

KNOWLEDGE AND REALITY

AMONG all the problems which are raised by the inquiry into the nature, limits, validity, and uses of our faculty of knowing, there is one that exceeds the others in its persistent difficulties and in the consequent need of clear thinking for its correct understanding, — not to say its satisfactory solution. This is the ultimate metaphysical question. It has to do with the essential and fundamental relation on which the very possibility of knowledge is based. This relation is that which, permanently and in every case of true knowledge, maintains itself between the knower's mind and the reality known, be it thing or some other mind.

Let us consider the problem for a moment from the point of view of the development of knowledge in the individual. The softly sentimental way in which Tennyson expresses the fact is true when subjected to experimental testing.

> "The baby, new to earth and sky,
> What time his tender palm is pressed
> Against the circle of the breast,
> Has never thought that this is I."

In sober prose truth, the baby hasn't thought at all; for it there is as yet no Self, no thing, — strictly speaking, no reality at all. But let the poet speak again:

> "But as he grows, he gathers much,
> And learns the use of I and me,
> And finds I am not what I see,
> And other than the things I touch."

From the point of view of the intellectual activity involved in all this learning, it would not so much misrepresent the truth of fact to say that the growing baby makes his Self out of one class of his experiences, and out of another always concomitant and pretty strictly correlated class of experiences, makes his world of things and other selves. But between himself as knower and all the things and selves he learns to know, a certain distinction which underlies all knowledge, a gulf to ignore which seems to abolish the validity and the possibility of knowledge, comes gradually to be fixed. It is the distinction between Self, the individual knower, and all else, the totality of things and selves as his objects of knowledge. As this distinction fades away, and the gulf which it seems to create is apparently bridged over or filled up, — an affair which we note with a sad interest in certain types of mental abberation ending in hopeless insanity, — we recognize the rapid or slow death of *knowledge*, both in respect of its characteristic of "sufficient" subjective conviction and its complementary characteristic

of "sufficient" objective certainty. The Self, confusing itself with other things, loses the very key to all knowledge.

But now arises the puzzling metaphysical problem. Knowledge seems, by its very nature to involve a sort of opposition between the knower and the object which he knows. The more objectively certain does the world become, the more does it seem to stand over against the knower as something independent of his knowing, independent of his very existence, and even independent of the existence of the entire human race, for its existence and for the more important conditions of its development. The world his mind has created, or at least largely coöperated in creating, lays claim to be something much more than his subjective world, to be, indeed, in some sure meaning of the words, an *extra-mental world.* Especially is this true of things, with the inner motives and causes of the behavior of which he cannot identify himself in the same sympathetic way in which he comprehends the inner motives and most secret causes of the behavior of his fellow men.

How shall this relation of opposition which seems necessary to all communion between knower and his object, be explained? How shall this gulf between knowledge and reality be bridged over so as to make possible a genuine and not a merely seeming passage between the two? No wonder that the late Professor James could say (Psy-

chology, Vol. I, p. 216): "Now the relation of knowing is the most mysterious thing in the world. If we ask how one thing can know another we are led into the heart of *Erkenntnisstheorie* and metaphysics." It is scarcely less to be wondered at that the same authority afterwards withdrew his contention that knowledge, like every other form of mental life, must be explained, so far as it was explicable at all, by assuming conjectural relations between it and conjectural states of the brain. And no wonder at all that of the working psychologist he declares: "Knowledge becomes for him an ultimate relation that must be admitted, whether it be explained or not, just like difference or resemblance, which no one seeks to explain."

Why, then, we may ask, should the average man, the man of plain common-sense, not do precisely as the working psychologist feels bound to do, and simply consider the relation of knowledge to reality as one that is ultimate and must be left unexplained? We might answer this question by saying there is indeed no good reason Why? were it not for two or three very stubborn facts. It is not easy for either psychologist or average man who has no special psychological science at his disposal, when once he has raised the question, "What is the ultimate relation between knowledge and reality, and what is it that we really know, — mere seeming or something, though partial, valid extra-mentally?" to

be satisfied without some attempt at an answer. And if this attempt leads him to the off-hand adoption of either the scepticism of extreme idealism of a certain type, or the stolid and unspiritual conception of the world which is the easily attained conclusion of what is so often called common-sense, the last state of that man is worse than the first. But, fortunately, it is usually vain for one who has come to maintain that knowledge is all "of phenomena," or that the distinction between appearances and reality is invincible for knowing faculty, to be quite happy in his mind. The reason is not that he could not fairly well adjust his practical interests — at least, those of the lower order — to such an agnostic position. The real reason lies deeper than this; and it is one of the several quite complete refutations of the positions of one school of so-called Pragmatists. Truth is not judged and accepted by the human mind simply or chiefly on the ground that it yields practical fruits. Truth commends itself primarily by the satisfaction which it offers to the reason itself. The offer of phenomena, or of appearances, or of maxims and opinions and ideas that simply "work," does not satisfy the reason. It craves assured commerce with reality. It tolerates doubt as to what things really are and as to what they are actually doing, only as a necessary stage on the way to knowledge which shall better represent and explain the real and the actual.

And there is a point where agnosticism, or the substitute for it in pragmatism or the modern "complete empiricism," takes a mighty grip on the development of character. You cannot build sound moral principles on a merely empirical basis of custom and legal enactments. You have got to uncover something that belongs to the unchangeable character of moral reason in order to give to the individual man satisfactory reasons for the worth and the ultimate nature of such principles. You cannot maintain religious doctrines, or religious convictions, or the sincere following of the truly religious life, while you suspect that your conception of God is an illusion, and that the belief in his immanence in nature and in human history is a superstition born of a form of anthropomorphism long since disproved by the positive sciences.

The chill that ran down M. Flournoy's spine when he tried to put himself in the position of the extreme "phenomenist" with reference to the reality of his own wife, children, and friends, was only a passing symptom of the deadly malaria which would afflict all the intellectual, social, moral and religious life of the race, if only agnosticism could prevail — as indeed it never can prevail — in any general way over the minds of men. At any rate, the conviction is there and it will stay: *The correlate of knowledge is reality, both as to that it is and as to what it is.*

But how shall this conviction be converted into

terms which will commend it to the intellect? How shall this mysterious and perhaps ultimately inexplicable relation between man's mind and things and other minds be described superficially, if not thoroughly analyzed and explained?

Various attempts have been made to answer the question just propounded, from the beginning of reflective thinking in its two twin branches of theory of knowledge and metaphysics down to the present hour. In their older and more persistent form, these attempts all agreed upon one cardinal point; this is the necessity of some mediary between the mental representation and the thing itself (or "in-itself"), some bridge over the gulf that yawns between knowledge and reality. For does not the nature of the problem demand such an explanation? Here is the most fundamental of all oppositions. On the one side the state or act of perception, — a mental complex, an achievement of mind; on the other side, the thing perceived, — a complex of qualities and activities which appear to be quite unlike those of the active mind. And what makes the matter still worse is the fact that all other minds are known to us only through the inferences we seem obliged to make in order to account for the apparent changes which we perceive in their material organizations.

This seeming need of a medium between mind and matter in order to account for the bare possibility of knowledge was supplied by the older

and cruder theories of sense-perception in the form of some sort of a tenuous and only half-physical copy, as it were, of the reality which the senses are to perceive. An image of the real thing, a sort of ethereal *simulacrum*, floats off from or is emitted by the real thing, and somehow enters through the senses to come into a closest contact with the mind. Is not this theory, which is so patently suggested by the experience of vision through the open eye, proved to be correct by the obvious presence in the eye itself of this much-needed minute but faithful image? For the other senses — and these the ones which give us the most forceful impressions of the stuff that "will not melt," in things, — such as the hand that grasps and clings, the back that pushes and the arm that pulls, this theory seems even to common-sense much less acceptable. Although in light pressure a sort of image of the thing pressed seems to linger on the surface of the skin, it must be much harder for the mind to force its way along a track of muscle and tendon to its trysting-place with matter, than to skip down to the image in the eye or to meet that image somewhere in its own special abode within the areas of the brain.

Turning the explanation about, however, and taking a start from the other side of the gulf, we announce as the mediary between knowing mind and real things known, one or more so-called "ideas." The ideation theory of knowledge is

much more subtle, scarcely less venerable, much more respectable in its following, and in some at least modified form, fain to maintain itself down to the present time. In Platonic thought, the idea is the true archetype or perfect immaterial pattern, of which all individual things are imperfect copies. "The more probable view of these ideas, Parmenides," says Socrates, "is that they are patterns fixed in nature, and that other things are like them." These ideas, the realest of realities, the pure intellect recognizes as kindred to itself. But with Aristotle the idea becomes the conception of the species, which can be realized only in the individual; and the problem how we can know that individual for what it really is returns in its full force.

"The word idea" says Locke (ESSAYS, etc., Bk. i, Ch. 1), "I think, serves best to stand for whatsoever is the object of the understanding when a man thinks. I have used it to express whatever is meant by phantasm, notion, species, or whatever it is which the mind can be employed about in thinking." The idealism of Berkeley agreed with Locke in extending this ambiguous term so as to include the percepts of the soundest sense as well as the phantasms of the insanest imagination. The sensationalism of Hume and his followers attempted to restrict the term to those fainter images of sensations which are revived in memory or contrived by the fancy; and thus cut more completely the bond which was to bring the

rational mind of man into a living and valid commerce with the realities of things, of other souls, and of God the immanent ground of both. Probably no other word has done so much injury by its loose and easy-going but captivating use, as the familiar word *idea*.

But alas! modern psychology and modern anatomy and physiology of the brain have utterly destroyed the entire basis on which are founded all forms of the theory of such mediation. There is no copy of real things to be discovered, whether in the form of a semi-spiritual *simulacrum* or a semi-physical idea. And there is no place in the brain where the soul has its so-called "seat," or convenient place for meeting and taking note of such *simulacrum* or idea. The Scottish Realism, wishing to restore the authority of the idea as originating in the percept, and of the resulting series and systems of conceptions that make up the body of science, but more especially of the faiths of morals and religion, reaffirmed the doctrine of an immediate knowledge of the materially real, an envisagement of things by the active knowing mind. This commerce took place, however, only in some locality of the knower's organism: it verified and founded knowledge, as certain of the more moderate authorities held, for *some* of the organism by *some* of the senses; but as certain of the more extreme and less wise in psychophysical matters were ready to claim, for *some particular* organ by *each of* the senses which

operated in and through that organ. The late President McCosh — to take an example of the latter class — went so far as to assert that we have an immediate perception of the pharynx as a real non-mental thing through the sensation of taste! The neo-Realists, on the other hand, know their physiology and psycho-physics much better than the older realists; as to the epistemological mystery involved, they are fain to shy facetiously or scornfully when they are requested to tell us something definite and clear about this. But the fact that all the external organs, when the nerve-tracks which lead between them and the hemispheres of the brain are severed the minutest fraction of an inch, lose every whit of their power to function by way of bringing about an immediate envisagement of matter by the attentive mind; and the other fact that, although there is some sort of localization of the different aspects and phases and forms of the perception of things, in order to complete the maturing and normal development of our knowledge of things, the brain acts as a whole, under the chemico-physical laws that make of its various parts a unity, — these two facts render unsatisfactory all such naive realism in its attempt to account for the commerce of knowledge and reality.

But if modern psychology and psycho-physics do not solve the mystery of knowledge, — as indeed they do not, — they at least throw a flood of new light upon the nature of that transaction

which bears the name of knowledge. And the most important thing they show is this: *There is no gulf to be bridged; there is no intermediary needed.* This is seen to be, no matter how wonderful, none the less true, when we know what it is to know. What we call mind is in commerce with what we call not-mind, from the very beginning of knowledge all the way through to its highest stages of development. Every act of knowledge is at the same time a denial of the identity of the being of the knower with the thing known; but no less of the actuality of their face-to-face relation. It is this immediacy of the seizure of the intellect, with its accompanying certainty of the reality of its object, — as not-Self but really in commerce with the Self, — which distinguishes knowledge from imagining, opining, *mere* thinking, or the holding to the truth of some form of one's moral and artistic and religious ideals, *merely* as ideals. Every effort to get back of this fact in order to account for it and for the convictions which serve to guarantee its result, assumes the verity of the same fact and the satisfactory character of the same guaranty. The fact is the fact of knowledge itself, as an attitude of the whole nature of man, —intellect, whether in the form of so-called ratiocination or in the form of so-called intuition, or in the form in which it always really is, the form involving both; feeling, in varied forms of manifestation and combination, yet always bearing

up what has been figuratively called "the sentiment of reality"; but, most fundamental of all, an attitude of related wills. The guaranty of knowledge is the source of all guarantees; since the very nature of all attempts to guarantee any particular knowledge can only be found as involved in the relation of knowledge to reality.

The meaning of what has just been said can be made clearer by a brief return to the question, What is it to know? but now from a somewhat different and nearer point of view. It has just been declared that the most fundamental thing about every act of knowing is the recognition of "an attitude of related wills." The one most impressive feature of the thing that is not-me is this: I am face-to-face with a being that wills not as I will. The central thing about the knower's knowledge of his own existence is the recognition of himself as a will, as a source of energy, a conscious doer of various kinds of deeds. The central feature of the knower's knowledge of his object, the real thing, is that it opposes and thwarts or, only as though forced, yields to, his will. This is the lesson in the reality of the world into which he has just come, which the puling, crying, kicking, sprawling infant is engaged in learning, as he aimlessly throws about his arms, his hands, or his entire body, or more gently steals his fingers over his mother's breasts or cheek. And as he begins to push and pull the chairs about, to tug at the table, and tear to bits his toys, or

to play with unwilling animals, and fight with other boys, he is advancing in the discipline required for all growth in knowledge of reality. His gruntings, whether of satisfaction or of unproductive energy, his bellowings of rage or cries of delight at achievements of his own, are signs that his emotional nature is coöperating with his will to make him know that he is not the sole reality in the world of things.

But the knower can not have *knowledge* of real things unless he learns how real things actually behave. Only in learning this can his knowledge grow. What moves him to this or that form of willing he, at first, does not in the least know or even inquire; indeed, all through his life the actual springs of many of his forthputtings of energy are very obscure. But some knowledge about his feelings, as prompting to action, his wants, his desires, his more mature plans, become clear to the conscious knower's mind. Things, those other and often opposed centres of an energy not his own, become evident, only as having minds of their own. They act as though they had: why should he not assume that they really have? Chief among these things that are plainly moved by minds like his own, are father and mother, brother and sister, playmate of either sex. How can he doubt that his mother, when she spanks him heartily feels as he feels when he is angry; or that she feels toward him, as he feels when he loves her, if she fondles him tenderly?

The case is almost as convincing — perhaps for the boy it is even more so — when his dealings are with the animals which he torments or pets. How shall he doubt the "extra-mental reality" of the dog, as a feeling-will, when the thing bites his leg or licks his hand?

This personification of all real beings as wills that, like himself, feel and plan, the naive and childlike mind carries down the scale so that it explains the behavior of all things which move so as to show signs of inner life; and even to the seemingly most impersonal of things. For in truth it is only by this process of more or less perfect personification that the knower can know what things really are, their inner constitution, their actual nature, so to say.

But here at once science raises its protest and says "thus far and no further" shall the process of personification go: here "shall its proud waves be stayed." To be sure, biological science in the most friendly coöperation with psychological science is not sure, indeed is very far from being sure, just how low down in the animal scale the appearances may be interpreted in terms of the reality of conscious mental life. Certainly we must include the horse and the dog; but shall we include the oyster and the earthworm? Shall we include the protozoon, the spermatozoon, the ovum, the white blood-corpuscle? And why exclude the tendril of the climbing plant as it feels about for a sure support; or the root in the

dry ground as it noses about after water; or the sperm of the water plant as it sets out on its journey to seek its union with the distant element of the other sex? Do not all these show unmistakable signs of the indwelling of some semblance of personal life?

But biology — properly enough — also, and more particularly, ranges itself with the physico-chemical sciences on the side of choosing and using what it believes to be strictly impersonal terms. Thus it talks of things, including the human Self with all its higher faculties embracing all knowledge, as centres or seats of energy; of energies as correlated or as in transition, instead of "wills"; of strains and tendencies instead of impulses or instincts or half-blind, half-conscious desire; and of abstract forms and laws instead of more or less regular modes of behavior. What is this way of speaking, however, when you interpret it into conceptions, beliefs, convictions, thoughts and conclusions, of the knower's own experience? It is simply another way of personifying reality as in commerce with the human mind on terms which have meaning only when they are interpreted into that life which is the mind's own. Otherwise, these scientific terms no more represent the life of the world, and of every individual thing in the world, as it is really known by man, than do the symbols x and y and o and ∞ of the so-called pure mathematics.

To this view of the reality of individual things

and of the world of things as known by such an innumerable number of individual knowers under constantly varying relations, the principle of relativity and the theory which fatally distinguishes between appearances and reality oppose their objections once more. Which is the *real* world; the world as *you* know it, or the very different world as *I* know it? Which is the *real* stick, the stick that appears straight when it is out of the water, or the stick — the same (?) stick — which appears bent when in the water? Which is the *real* horse, the one that appears so large when we stand beside it or the other that appears so small when two miles away? Which is the *real* tree, the one which fills so large an angle of vision when near by or the same (?) tree which fills so small an angle of vision when placed on the top of the distant mountain? Thus may we go through the whole world of reality as known by man and reduce it to an ever-changing phantasmagoria of appearances. Thus may the infinity of its appearances, to an indefinite variety of knowers, under an infinite variety of conditions, be turned into a conclusive argument that it has no reality outside the individual knower's mind. Poor world! to have its inexhaustible richness made into a plea for hopeless bankruptcy in the trial court of speculative thinking and scientific theory.

Let us the rather hold that the wealth of the world's means of appearing is the more incontestable proof of the reality of its existence. To

descend to particulars: The stick which appears straight out of the water is not the less a real stick because it appears bent when in the water. On the contrary, it proves its reality by being its own source of these different appearances under changing relations to the observing eye of man. The horse which appears so large when near by and so small when far away, is not on that account the less real. The very fact that it is the source of these changes in its appearances differences it from the painted horse or the horse constructed by the imagination. The artist can make a picture of a tree on a distant mountain that shall fill the same angle of vision as a precisely similar tree in the foreground; but he cannot do the same thing with the same real tree. Or if he attempts it by use of field-glass or telescope, the reality will have its way as to the appearance resulting from the change in the actual space relations. The same conclusion is valid with respect to the differences which each individual thing elects to present to different observing minds under essentially the same spatial and other most important relations. If *you will not attend, reality,* like any other wise teacher, *will not reveal* the profounder of its truths to your superficial observation. The thing is itself no less real because it *will not* kowtow to your carelessness, but *will* only show its own passing and superficial features to the mind that does not take the pains to penetrate deeper. For

Reality is rich enough to supply a true and manifold content to all degrees and kinds of cognizing minds. It is the Self-same; and yet it can adapt itself to, and utter a message for, every individual observer from innumerable different and varying points of view. Every single thing (and how much more the Universe or System of Things!) has its physical side, its chemical side, its utilitarian, economic, æsthetic, and even moral and religious aspects, and yet its own individual laws of behavior and style of development.

To illustrate and enforce further this most important truth, let us make use of a somewhat lengthy quotation from the more elaborate treatment of the same subject by the same author (Philosophy of Knowledge, p. 538 ff.) "Let this truth of fact and of epistemological theory be illustrated by the following examples. I am standing upon the shore of a body of water, and I stoop down and gather a handful of the sand which lies at my feet. To me it appears to be what it would appear to be to any one else of similar constitution of sense-perceptive faculty, who had had a similar experience in the most ordinary developments of conceptual knowledge. It is known as 'mere sand,' having such qualities as the common senses of men discern and such uses as have been ascertained by the growing experience of the race. But now I take from my pocket a magnifying glass of good lens power, and by looking through it, transform the common

sand into an innumerable collection of significant forms, — either crystals whose molecules have arranged themselves in seeming obedience to mathematical formulas, or shells that show their origin in having been deposited by millions of living beings in the past of long ago. I carry this collection to the chemical and mineralogical or biological laboratory, and the experts there spend much time in determining the genesis, the atomic constitution, the specific qualifications and physical or organic connections of the elements of that which to the naked and untrained eye appears but common sand. From them I learn, with increasing wonder and admiration, of the wealth in reality of that which seemed at first so poor and ordinary a thing. And as I reflect upon the mysterious action of the forces that either rapidly marshalled the atoms along what appear to be consciously selected lines of preference, or more slowly built them into a tiny organism according to a more or less obvious plan, I am encouraged to attempts at higher flights of cognitive faculty. The marvellous inner life of what the scientific man calls Nature, and the mindful manifestation of what the devout soul recognizes as the power and wisdom of God, impress me profoundly. Speculative interests are aided by ethical and æsthetical interests, — although, perhaps, of a vaguer and less easily defensible sort. But yielding to the serious impulse I proclaim as a 'cognitive judgment': This tiny thing, when

considered as what it is in itself, and what, in its origin and connection, it represents, is indeed a 'moment' of the Divine Life, a realization in particular of the Universal Spirit, of the Absolute Self."

"Now let it be noted that, while all these 'knowledge-judgments' as to the being and implied powers of this handful of common sand do not rest on precisely the same foundations for their genesis or their validity, they do not at all, of necessity, contradict one another. They may all be alike true; they may all be needed to express, even imperfectly, the reality of this particular thing. They seem, indeed, to follow so quietly and beautifully in train for the mind that will not brusquely (and almost brutally) interrupt its own life of knowledge that they have good seeming of being true. That sand there *is*, — white, hard, heavy, and good for mortar or to be burned for lime, but it *is* also, known to chemistry as constituted out of certain hypothetical elements; to biology or to mineralogy as having such a mechanical structure or vital genesis; and to the naturalist as a part of the great system of organic or inorganic evolution. But to the higher philosophical reflection it *is*, in very truth, a being that finds its existence and attributes in the same ground in which all existences, with all their attributes, are found. To the knower, then, this one particular thing stands, under the general relations of knowledge, as being at the same time and in reality, all that sense-perception, science,

and philosophy tell him that it is. And if he would know, as completely as man can know, this thing, this common sand, he must regard it from all these different points of view."

We will now return for a moment to the attempt of the positive sciences to express all this in a strictly impersonal way. The world of things is divided up into masses, which are quantitatively related as centres of so-called forces, under so-called laws that define more or less exactly how these masses behave toward one another under a great variety of changing relations. These forces and laws are those of gravitation and other formal designations such as are recognized as valid by the science of physics. But since our total experience with things is by no means wholly accounted for in this way, the masses are analyzed into molecules and finally into atoms, the different classes of which have their own natures and lawful ways of behaving in a great variety of relations to those of their own class and of other classes. When these atoms "cut up" in most unexpected and wonderful ways, as they sometimes do, chemistry has to introduce a new kind of atom, or a new law of chemical action and reaction; or leave the affair for the present in the place of an unexplained exception. But of late startling new experiences with the world of things have forced upon science the necessity of breaking up the atoms themselves into thousands of *ions*, which exhibit incredible energies and whose ways of

behavior are still, in large part, profoundly mysterious. When we come to those masses or collections of atoms which manifest what we call signs of life, if we remain honest to our fundamental convictions, we feel bound to acknowledge that something more closely akin to our conscious activities is indispensible, if we are to give a satisfactory account of the way such things behave.

Of all this trustworthy scientific process, and of all its trustworthy conclusions, when process and conclusions are stripped of their figures of speech and rendered back into terms of concrete human experience, we can say only this: The process is one of personifying; the conclusion is that the world of things can be known at all, if known as it really is, only after the analogy of the personality of the knower. It is known not as a collection of dead stuffs, or as the construction of the senses, or the imagination, or the intellect, or the so-called intuitions, of the knower, — uncontrolled by the extra-mentally real; it is known as a net-work of individual wills (centres of force) acting according to their own natures, and with reference to their changing relations to us and to one another (in more or less uniform ways, or in obedience to law, or in conformity to mathematical formulas, as science likes to say). And some of these things seem to be wills that are to a certain extent inspired and guided by consciousness (centres of a conscious life, as well as centres of force under the control of law). In a

word, all knowledge is for human minds, so far as it guarantees the reality of things, a commerce of minds, — of the mind of man with the mind that is centred in or revealed through the things. And commerce implies community, or kinship, not only of interests but also of natures.

A brilliant and well-nigh desperate attempt has been made of late, summoning all the resources of rhetoric in its appeal to certain emotions, rather than of clear thinking and science in the appeal they make to the reason, to break up the ideal of some consistent *unity* to the *Universe*, and to substitute for it the more primitive conception of a number of disparate and even conflicting worlds, — a so-called "pluralistic universe." We are requested, for a moment at least, to tolerate such a contradiction in the very terms which it is proposed to give to the results of reflective thinking in view of our total experience.

Now it must be admitted that there are innumerable facts and laws, or uniform ways of the behavior of things physical and social, from which there seems for man no possible escape, that are very trying to his feelings and that seem almost maliciously designed to cause him misery and to provoke emotions which the refinement of moral consciousness requires him to repress. It is very clear that things do not seem to be arranged, or events to occur, in the manner or the order which would be most satisfactory to the ideals of art or morals or religion, — at least

until these ideals have been modified by a great accession of wise moderation and more profound insight into the mysteries of the spirit and its destined life. It is quite as evident also that the most positive and exact of the sciences are ever finding seeming exceptions in the constitution and behavior of things, to their most carefully calculated formulas, their most amply proven laws. The more the advances of science reduce the appearances to a reality with all the characteristics of a rational and perfect unity, the more do facts accumulate which make necessary important modifications in the nature and working of the principles which underlie and control the forces that are actualizing this ideal unity. Witness the scores of theories which are constantly arising in order to bring the historical facts under the unity of some one theory of evolution! Witness the twistings and turnings and subterfuges to which physics and chemistry are obliged to resort in their effort to adapt the principle of the conservation of energy to the behavior of radium; as well as their persistent inability to bring all the vital phenomena under any conceivable modification of this principle! And have we not ourselves just been exalting to the *n*th degree those varied capacities of things which it is so difficult to reconcile with any real unity of being or stability of character?

Such experiences, however, as those just referred to, if they were many times more numerous

and hopelessly inexplicable, would not warrant the conception of a "pluralistic universe,"—known or knowable by man. And, indeed, taken as a whole, these very experiences only emphasize more impressively the growing confidence of the race in the conception of a rational and orderly constitution for the system of known and knowable things. All true advance of every form of science is in the direction of confirming the truthfulness of this conception as applied to the reality of things, the actuality of events. In all modern science this conception is at the same time the general assumption which investigators think it right to take into all their research, and the conclusion to which the results of all their research are finally discovered to be contributory. If any generalization is found to admit of too many exceptions, the facts on which it was based and the seeming exceptions must be included in some higher generalization. All implies and tends toward an all-embracing Unity.

This procedure of the positive sciences commends itself to the intellectual and æsthetical emotions, which are in a way as truly dominant in science as they are admitted to be in art. Hence the sciences, in the higher and worthier flights of the scientific imagination and the more far-reaching journeys of their reflective thinking, have agreed upon a certain ideal, — to be sure, of vague features but of a distinctly spiritual character, — which they call Nature (in the

large, as it were) and think appropriate to spell with a capital. And when we adopt the more truly æsthetical view of the world of selves and things, the view which art has in the main always taken of it, we regard even the seemingly ugly and the truly tragic elements and actions of both selves and things as somehow indispensable for the highest æsthetical effects and for the progressive realization of the loftiest æsthetical ideal. But when we take to our confidence the voices of the most developed forms of morality and religion, we cannot fail to be persuaded of the same truth, unless we are ready quite distinctly to part company with the comfort and guidance which they offer. To neither morality nor religion is the thought of pluralistic universes acceptable. The conception of any universe in which moral ideals are not supremely worthy is intolerable; to every universe the command of monotheistic religion is the same: "Thou shalt have no other gods before or beside me."

The question in the Faust of Goethe recurs therefore; and in its answer we must find the hypothesis which shall guarantee the validity of the relation between man's knowledge and the real universe whose product and child man is.

"Who dares express him?

. . . . . .

The All-enfolder,
The All-upholder,
Enfolds, upholds He not
Thee, me, Himself?"

To this question the physical and chemical and biological sciences — properly anxious to remain within their appropriate spheres — may answer with a detailed descriptive history of myriads of centres of peculiar forces, with distinguishing natures of their own, which act and react in more or less uniform ways under constantly changing relations with one another; and yet so as to preserve a certain admirable unity of existences and order of progress. Personifying this unity and order, science may speak of the whole in language similar to that of Parmenides and call Nature "uncreated and undestructible, alone, complete, immovable, and without end"; or in the better modern way declare:

> "*Alles Leben der Natur*
> *Ist ein Meer von Thätigkeiten;*
> *Ohne Rast auf ihrer Spur*
> *Muss Du mit dem Ganzen schreiten.*"

But further reflective thinking will interpret this ideal in terms of a Will that is guided by ideals of ends to be actualized in every form, law, and relation of these myriads of individual things and selves. In this way there is discovered to the knower, who himself *wills* to think things through far enough, the principle of one rational mind pervading and manifesting itself in the system which the world is, — the principle to which there has already been made reference as one of the most reasonable and comforting of the truths which the knower *may take* for granted. But we

now see that this same principle is a postulate which underlies and confirms and justifies all human knowledge. It, and it alone, states truly the relation which the human mind can, and does, establish between the "sufficiency of subjective conviction" and the "sufficiency of objective certainty," between knowledge and reality.

CHAPTER X

WHAT IS THE USE OF KNOWING?

TO ask the question which heads this Chapter in a quite unlimited way, as respects every kind and degree of knowledge, would be to excite the spirit of mirth rather than of philosophical inquiry. For what can be plainer than the truth that without knowing something, — and, indeed, for that matter, without knowing something about a great number of subjects, — no child could come to maturity even of the most purely physical or so-called practical sort. Some knowledge of the kind that is wrested from nature and from communion with men in a manifoldly stressful way, is necessary that the human infant may even set out on its journey toward maturity, whether of body or of mind. To ask, then, What is the use of knowing? is about the same thing as to ask, What is the use of living at all? Fortunately, with the human being as with every form of living beings, this is a question which does not occur instinctively and naturally, so to say, at the beginning of his career as a knower. The natural and wholly unconscious, or only semi-conscious reactions of sucking, swallowing, crying out in inarticulate but, to the adult hearer,

meaningful sounds, and of kicking, following with the eyes, grasping at with the hand, and other similar performances, are not so much the results as the incitements and media of the process of knowing. Even attention to these processes, and the further process which converts the sequent impressions into means of learning, are somewhat sternly but most effectively enforced upon the infant mind.

It is the reluctant schoolboy being dragged to school, or somehow punished for not learning the tasks which cause him pain without, as the phrase is, showing any "in-itself-good," who raises the peevish question, What *is* the use of knowing *this* or *that?* But neither "this" nor "that" is commonly, how to pitch or bat a base-ball, how to trap game, or how to "lick" the boy that has bullied or attacked him. For your schoolboy, in general, is a great pragmatist; though his working standard customarily has reference to some end near at hand and which he particularly wants to have accomplished on account of the advantage he expects to secure thereby.

Grown to a wider horizon and a more distant prospect for his field of advantage, and forced or encouraged to learn how to do more and more of the things necessary to reach or even to approach his coveted ends, your average adult is your schoolboy "writ large." He is still a pragmatist of a still narrow type. Only he now knows that there are many more forms of good for which one must

work, if one would have a share of them; and that for the seeking and securing of a share in these goods there are customarily many more ways than one of doing the work.

Now all this line of answers is as suggestive and as true for the man whose end is evil as for the man whose end is morally good; as true for the burglar or the pickpocket as for the faithful bank-clerk; for the thorough workman as for the artizan who shirks his work; for the devil, in fact, as for the saint. It is only when we raise the more ultimate and difficult question of values that we confront the question, What is the use of knowing? in its more difficult, profound, and morally worthy form. And, indeed, the same thing is true of every question of use. What is the use of living at all? No one can give an answer to such a question as this, or to any similar question, without first having selected some standard of values. What *gives* life its worth? this is the underlying and all-determining question. In certain quite similar crises of different lives, one man will gain practical answer to this question by suicide, another by prayer for renewal of courage and hope.

As to the increasingly large number of questions to which the growth of knowledge in the individual and in the race affords the answer by telling how to do "work," there is little need of expanding the argument or enforcing the thought by a long list of illustrations. In every kind of work, the

success in its working depends to a large extent upon the knowing how. But even so, not wholly so. For shamming and shirking and equivocating seem now, as they always have been and to the millennium will continue to be, successful ways of making falsehood rather than truth, *work*. And no one can prove, on the basis of fact and with an overweening preference for the "in-itself-true," that the truth is always, in all fields of human endeavor, the best working hypothesis. "Honesty is the best policy," so the proverb runs. But is it really? Only if you think the being honest is "in-itself" good policy. The *dictum* is extremely doubtful if your policy is just anyhow to become a millionaire.

There is, however, a much larger and more important way in which the usefulness of knowledge proves itself as of legitimate practical import. The typical lonely scientist, like the typical lonely philosopher, seeks the truth diligently and at the expense of many forms of practical good, but, as the phrase is, "for the truth's own sake." But the world, if not the individual knower himself, reaps large and increasing good in the way of practical results from the truths which the devotee of science or of reflective thinking succeeds in discovering. It will doubtless seem passing strange, but it is strictly true as historical fact, that the greater part of the immense benefits in the increased comfort, safety, and pleasures of living, and the vast and rapid

developments of the world's resources, and the resulting uplift of the world's civilization (whatever estimate we may put upon this latter gain), —of all these good things for the life of the world's people, the greater part has not been won, with deliberate intent to seek practical results, by the positive sciences. These sciences have been chiefly and primarily devoted to the search after the truth of things. How their findings might be turned into increased use of things has not been their chief and primary concern. Indeed, many of the greatest discoverers have never seen the realization in any practical way of the results of their devoted and successful search after the truth of things. Many of them have never had any considerable interest in such realization. It has been in general the men of second-rate scientific quality, and of inferior value in the field of discovery, who have been most successful in applying to improved ways of living the results of that truer view of the reality of things and of men which their greater forebears had brought into the light of knowledge. And with these workmen, as with the workmen in the thorny and stony fields of speculative philosophy, their view of their pursuit and of its rewards has much more resembled that of the artist than that of the successful business man. They were engaged in forming and giving, as far as possible, concrete pictorial representation to brave ideals, such as they believe nature to be progressively realizing,

rather than in collecting mechandise from nature's stores in order to corner a rising market.

But, on the other hand, — and this too is undoubted historical fact — the discoveries of science, like the truth of the ideals established by the choicest thinking on the highest themes, have been pouring a rising tide of wealth in goods of marketable values, into the ocean of the life of humanity. The truths which science and moral philosophy and reflection on the religious experience have shaped in ideal forms, have all the more abundantly proved themselves truths which it is practically most useful to know, and which apply to the pursuit of a variety of practical ends. Indeed, the positive sciences have wrought changes in the production, preservation, and distribution of all forms of the practical, in the narrower meaning of this word, which are only comparable to the results produced in the formation, continuance, and ever widening influence of the moral and religious opinions and beliefs of the best few, over the practical, in the higher meaning of the same word.

In confirmation of the contention just set up, it is not difficult to select a few striking examples. That curious sort of thing called radium, with its enormous store of energy and preposterous way of behaving itself, has for some years past been eliciting the intensest curiosity on the part of the students of physics, purely for physical science's sake. The working of it has shaken the

whole of the old-fashioned atomic theory and is tugging hard at the strings which bind the convictions of the modern physicist to the theory of the conservation of energy and the mathematical formulas for the equivalence of the different kinds of energy. What is the truth about radium; and how does this truth, if we can find it out, affect our other truths, or what we have supposed to be truths, about the world of things? Such is the leading question which the student of physics, for pure physics' sake, is "putting up" to radium as he views from all sides its mysterious behavior. And had it not been for this purely scientific interest, we should probably never have known any thing about the more practical uses of radium. But now another group of investigators, with little or no interest in pure physics, and with less knowledge of physical facts, but with equal diligence and scarcely less of experimental skill, are putting the practical question to this strange, new creature, radium. They are asking it: "Of what use are you?" "What can you work; and how do you work?" — whether it be for the benefit of suffering humanity or for the increase of my reputation or my resources. And far baser but shrewder men are asking the practical question: "How shall we *work it* in order to secure the most *practical* of all the good gifts which radium is prepared to make to humanity — pretty exclusively for ourselves? Surely, it is a long and downhill road from the men who work them-

selves in the laboratory to find out the true nature of this individual thing and its relation to other things, before we reach the men who are fain to exploit the working value of radium to their own practical good. Centuries of investigators in pure chemistry, men whose interests were absorbed in attaining a true conception of the invisible constitution and behavior of things, but who gave comparatively little thought to any prospective practical value to their discoveries, were the necessary antecedents of the increasing number of the uses to which chemical science may be applied for the increase of almost every form of human welfare. Witness the researches that preceded and led up to the preparation of the kinds of serum that are so effective for the abatement of various forms of disease, and even for their final banishment; not forgetting that chemical synthesis, *salvarsan*, which seems just on the eve of showing what and how it can serve for the relief of those terrible evils, *tabes dorsalis* and *paresis*. If we were to attempt to tell what the manufacturers and the managers of railroads, and the other gentlemen chiefly interested in the practical usefulness of knowledge, owe to the students of electricity and chemistry and other allied branches of the positive sciences, we should need volumes even to enlist and describe the most notable benefactions.

All that has been said hitherto can scarcely have made the truth of fact more obvious than it

was at the beginning. The usefulness of many of our knowledges is commensurate with the use of bare living, the use of living at all. The usefulness of even the most recondite and seemingly remote from our practical life, of the truths of science, is demonstrable by an increasingly great and now really enormous number of widely distributed experiences. The lonely student of the most purely theoretical and ideal aspects or sides of the world of real things and real selves, and of its actual transactions, whether physical or spiritual, may justly comfort and encourage himself with the persuasion that his discoveries may — likely enough — in some future time, either immediately or mediately through their subsequent development in other hands, eventuate in no small practical good. For the world is one world; and so the mind of man, from whatever point of view it comprehends this world, must understand it. The theoretical and the so-called practical cannot ultimately and forever be kept apart. What is the use of knowing? is a question which cannot, indeed, be answered by saying that all knowledge serves some useful end outside itself. It may, however, be answered by saying: You do not know beforehand whether any particular form of knowledge, though it may for a long time seem remote from the interests of the daily life, will not eventually become of the utmost practical usefulness. Why should the common man care to have known the truth of the

existence and nature and behavior of radium? Of what use is such knowledge to him? The answer comes sharp and quick when he is attacked by cancer, or the attack chances to fall on the wife by his side. Chemo-therapy expresses itself in intricate and, to the man of common-sense, unintelligible formulas; but chemo-therapy is the most promising branch of therapeutics. And men of common-sense as well as chemists get sick at some time or other.

Below all this lies the fundamental answer to the question, What is the use of knowing? It has already been hinted that the answer to this question is somehow wrapped up in the answer we give to another question: What is the use of living at all? — and, of course when one makes the latter inquiry seriously, one means not simply to refer to *mere* living, just "hanging on" to existence, as the phrase is, but to living with that fulness of existence which is the right and the obligation of the human spirit. But the answer which one will now feel bound to give will depend upon whether one believes that there is any reality corresponding to the words "a human spirit"; and upon the feelings and purposes which the realization of this conception call forth.

As to current philosophies in their more naive form, there are two ways of answering the question, What — in the last analysis — is the use of knowing? What is the real value of knowledge? And then follows (or should it not precede this?)

the similar but by no means identical question, What is the meaning of truth? One of these current answers, which wear the raiments of philosophy, the garb of the reflective thinker, is the answer of the Pragmatist. The meaning of truth is its usefulness for the knower to accomplish for him some kind of work. The value of knowledge, as measured by the ultimate standard, is its capacity for work. The philosophy of the other and opposed opinion as to the value of truth and the usefulness of knowledge is oftener implied than formally expressed. It prevails most widely among the devotees of science; or of some of the many forms of the more exact and defined knowledge which the word "science" is intended to connote. When those who hold this view are reminded — and much more when they are accused — of cultivating knowledge without regard to its possible work in any available practical ways, they reply with a lofty and justifiable pride in their pursuits, that they are students "of science for science's own sake." For them, knowledge has worth of its own, and quite without consideration of a kind of marketable value, whether in the domains of commerce and manufacture, or of art, morals, social intercourse, and religion. They would far rather be ranked with Lord Kelvin or Galileo than with Mr. Edison or the head electrician of the Bell Telephone Companies.

Now neither of these attempts at a philosophy of knowledge bears quite well any thorough

analysis. And as to the first, the moment we begin to think our way through any one of the various meanings given to the illusive, ambiguous, and very shifty uses of the word "work" and its correlative substitutes, its fundamental fallacy begins to expose itself. Indeed, the very question which Pragmatism proposes to answer, is itself proposed by Pragmatism in an ambiguous way. When we inquire into the "meaning of truth," our inquiry itself may mean one of two rather different things. It may mean an inquiry after the test of truth, the method of discerning and establishing truth from the midst of surrounding and entangling errors; or it may mean an inquiry as to the value, or relation to various forms of what men esteem good, of the truth when established by the application of sufficient tests. In the one case, the end of the inquiry is to decide what particular judgment is true. In the other case, its end is to decide in what the worth to me consists of this or that particular judgment, when it has to my thinking proved itself to be true.

What then do I mean when I say, This is the truth — whether of fact, or of opinion, or of law, or of some wider generalization called a theory or a principle? Surely, whatever else I may mean, I do not mean that the particular idea or judgment will serve the particular use to which I wish to put it better than some other idea or judgment. In many cases, lies and errors

and superficiality work better than do the truth. Perhaps in the majority of cases, half-truths work far better than do whole truths, or "plain truths," or "unvarnished truths." Is it not still the prevalent ethical code among physicians that deceit is morally and practically justifiable, whenever it is likely that deceit will work to the benefit of the health or the prolongation, though in misery, of the life of the patient?

There is a sense in which the choice phrase of Pragmatism, as an answer to the question, What is the use of knowing? reduces itself to a truthful platitude. The meaning of truth is that some idea or judgment does the work of explaining experience. What *is* the meaning of hypothesis, theory, law, principle, but just this; they work more or less completely for the explanation of certain classes and groups of experienced facts. This, however, is just what has been understood to be the meaning of the attribution of truth to such affirmations and negations, from the beginnings of logical doctrine down to the present hour. Indeed, this is also essentially what the naive language of common-sense means by talking about truth and foolishness or falsehood. The intellect seeks explanation; what explains is true, — to a greater or less extent according to the measure and the obviousness of its service. But even with this interpretation of the pragmatic doctrine, we reach the limit when we come to truths

of fact. Judgments affirming or denying these are not made or tested in the interests of explanation. We do not ask whether the truthfulness of the fact, *as fact*, has any working test beyond its reality as fact. It is *just there;* whether it explains or can be explained, or not; and whether it has any meaning, or not. We accept the fact as the basis of all the alleged or proven truths, of whatever kind. To paraphrase Goethe we affirm: Not in the beginning was the light of intellect, with its curiosity and search for truth; in the beginning was the fact, the deed, the thing there, the event that has occurred, the relation already actualized.

Even more unsatisfactory is the pragmatic answer when we raise the question, What is the use of knowing as measured by the intrinsic value of the truth which knowledge is supposed to grasp? With regard to those moral and religious truths which claim the control of the conduct of life, undoubtedly their worth must be largely estimated by reference to the character of the fruits they bear in the actual conduct of life. Undoubtedly, also, these fruits when sufficiently proved to be good add an enormous weight of influence on the side of proving their own truthfulness. But they do not do this kind of good work, unless they first get lodgment in the soul as doctrines and beliefs honestly and intelligently accepted and held *as true*. First the truth, with a value for the mind and heart all its own; and

then the worthy work which the truth effectuates in its power over life.

But there are large areas and many kinds of truth that can in no hitherto conceivable ways prove their practical usefulness, their ability to work otherwise than to alter or enlarge our views of the universe, and so make ever new and increasing demands on the intellect of man for discovery and for proof and for harmony as required by the ideal of a Universe that has a glorious unity and consistency of its own.

The other theory of the testing and worth of knowledge regarded as a true though partial apprehension and comprehension of reality, scarcely stands in need of refutation. It needs only to have its own true meaning explained. When any one says, "I am no manufacturing chemist, or electrical engineer, or employee paid by some grasping syndicate with a salary dependent upon the amount of dividends I can manage to turn over to the stockholders, I am a student and lover of science for science's own sake;" although such a one utters a valuable truth, he does not mean exactly what he says. For the word "science" is a wholly abstract term. There is no reality to serve as the correlate of science. There is no real existence to be so named, no actual event to which this word is appropriate. So then "science" cannot have any "sake of its own."

When, however, we understand this phrase to mean, for my sake as a rational being, or — better

still — for the sake of mankind, then we have the primal and most important consideration introduced in answer to the question, What is the use of knowing? For Truth is one of those forms of satisfaction which the nature of man seeks, and whose worth cannot be resolved into anything lying wholly outside themselves. Knowledge is the normal and legitimate and only primary satisfaction of the intellect. It is a satisfaction, which may be associated with and serviceable to various other forms of satisfaction; but to none of these other forms can it be reduced. In this meaning of the words, knowledge is a good-in-itself. Its place in the system of goods, so to say, can be taken by no other form of good. In some souls, and these of the finest texture and loftiest aspirations, the search for this kind of satisfaction becomes an absorbing, a burning passion. Were it not for such souls and the sacrifices they make in the interests of truth for its own sake, the civilizations of the world would be in a far different state at the present time. And were it not for them, and for their continuance in the future, the hopes of the race would be meagre indeed.

But knowledge is not the whole of life; and truth is not the only means of affording satisfaction to man's rational nature. There is the craving for beauty and the aspiration after moral goodness, with the satisfactions which art and morality can minister to the side of the higher

emotions and sentiments. Knowledge, like beauty and moral goodness, has its supreme usefulness, its final purpose, in the contribution it makes to the perfection and worth of personal life. It is this perfection of personal life which is the thing of supreme value, — of a worth, beyond which there is nothing conceivable as more worthy, and except as ministering to which, there is nothing that has real worth.

This then is the final answer to the question, What is the use of knowing? In the next chapter we take it up again for re-examination at a lower level.

CHAPTER XI

THE VALUE OF THE MEN WHO KNOW

THE practical advantages for the individual knower that flow from his possession of a considerable fund of knowledge have already been sufficiently remarked. But there is another point of view from which to regard the usefulness of knowing and the intrinsic worth of the man who knows. This point of view opens into much more lengthy vistas and upon much more extended domains of human interests, stretching toward infinitely distant horizons. We speak now of the social and civic advantages of knowledge and of the value to society, to the state and to the church, of the men who really know. This is a kind of worth which accrues in an unequalled degree to the advantage of our modern complicated life; it is fraught with good or evil which seems destined to a perpetually increasing intensity and aggregation.

In all conditions of human beings when living together, the man who knows is a valuable asset to the community, small or great, to which he especially belongs. In the lowest, crudest, and most embryonic stages of human development, this is still true. The male head of the cave-dwelling

family who is skilled especially well to fight the bear, to trap game, and to catch fish, is worth more than others, not only to his own family but also to the families who may be occupying the near-by caves, however unsocially. The chief of the tribe, or the good few of its warriors, who know most of strategy and of how to make bravery effective for defence as well as for offence, are the tribe's choicest asset when it is living in perpetual relations of feud with surrounding tribes. And the old men who are wise in council are no less valuable to the interest of the entire community, when the welfare of the whole calls for the formation of feasible plans by expenditure of a shrewdness won by penetrating observation and much reflective thinking over many years of stern experience.

Even in more complicated social conditions, and down to this very hour, the knower who has had no advantages of a scientific education or of intercourse with men learned in matters of grave practical import, is of more than common worth to his particular community. Is it a question whether the fishing fleet shall put to sea from some hamlet on the coast of Norway or Newfoundland? The weather-wise old fisherman may control by a single sentence or by a shake of the head, the destiny to widowhood or to rejoicing at reunion with their husbands, of a score of women in the hamlet; — and this, whether the proclamations of the Weather Bureau have

reached so remote a place, or not. In many a locality accessible to these proclamations in this country, grandfather's prognosis of the weather more surely determines whether the hay shall be got in than does this same Weather Bureau. And as to what crops, on what soils, and under what modes of cultivation, flourish best, — this is not infrequently learned from men who know without ever having seen the inside of an agricultural college. It is the knowledge and not the manner of its gaining which serves the need of society.

In spite of such facts as those just stated, however, the value of the knower who has been made some special form of an expert by a more or less highly specialized kind of training is constantly on the increase. This demand for expert knowledge is an inevitable result and necessary accompaniment of the increasingly complex economic, social, and civic life of modern times. The demand is one to which the improvements in our modern system of education, and the increase and refinements of the means at the disposal of this system, have by no means as yet been able to respond. In every line of modern business, in every prominent and influential social relation, in every legislative and administrative office in church and school and state, the demand for the expert far exceeds the supply. But when we say "expert" we must understand the men who *really* know, and never the men who merely *pretend* to know. The latter, being as a rule

more ready to commend and to "push" themselves, are perhaps on the whole likelier to be trusted temporarily with positions and commissions that require expert knowledge. It requires something of an expert to know a real from a pretended expert. For there is a kind of kinship and reciprocal sympathy and common understanding between the men who really know, which is impossible to produce as between the man who really knows and the other man who only pretends to know.

We might pause here for an instant to anticipate an answer to that fundamental question with which our entire treatise concerns itself. We have not proposed this question "plumply" for some little time. It will be remembered that our main inquiry is one with which every individual should concern himself; an inquiry with which, in fact, most men do more or less concern themselves. The question is: What can *I* know? But in answering this question, would it not be absurd to encourage every man to believe that, on some special topic of knowledge, he may make of himself something of an expert? Perhaps so; and yet even of this we are not quite sure. For every man, who is of average native ability and is under average fair conditions of advantage, if he *wills* to give his mind to his work and to put his heart, in a whole-hearted way into it, may probably make of himself something of an expert that is really worth the while. But let

every man, from the very first and unswervingly all the way through, put away from himself with a fine moral scorn the pretension of special knowledge where he has it not. Nor are we at all sure that the man who is considerably below the average in both ability and opportunity may not, if he will pay the price in effort, become such a knower of some things that we should all feel in his presence as my friend the Australian scientist said he did when talking about things known to the aboriginal Australian, because within his horizon and of daily important interest to him — that is, feel like taking off our hats to him. [For my own part, the confession is pat: Nowhere in the world of men, Occident or Orient, have I conversed with the man who could not tell me some thing which he knew better than I did.]

Again we come back to the same conclusion, with the estimate of the value of the men who know, however their knowledge is obtained, increased rather than diminished. That something is needed to correct and abate the monstrous evils which are so rankly growing out of the mistakes, — ranging all the way from slight mistakes to awful blunders, — the disastrous experiments, the blind follies, and false estimates of value, prevailing in modern social and civil affairs, would seem to require no argument. We hear much — but not more than is true and, indeed, not one-half of what is true — about the corruption that flourishes in business, in social

life, and in politics. Nor are our educational, reformatory, and religious institutions altogether free from corruption. But all our institutions of every sort are probably suffering more from the incompetence than from the corruption of their leaders and the managers of their affairs. Moreover, corruption and incompetency go hand in hand; or perhaps it would be the more fit figure of speech to say: Corruption and incompetency play into each other's hands in the game which results in the plunder and increased misfortune of all the people.

When, then, we praise highly the values of the men who know, and recommend putting the real experts in all the places of advice and control over the welfare of society, and of the church and the state, we assume that the aforesaid experts are wise men, knowers who are also morally good and true. The *mere* expert, if such a kind of real knower can be said to exist, is by no means always the best man to be given leadership, much less to be placed in sole and unguarded and uncriticised control, in the affairs with respect to which he is expert. Fulness of knowledge by no means always secures efficiency in leadership or even honesty in the administration of a trust. For all administrative and executive positions those qualities which give bad as well as good men power to get done what they will to have done, and influence over others, are quite as essential as is knowledge.

But let us once suppose that in talking about the value of the men who know, we make the assumption (on the whole most likely to be justified), that the knowledge is real and not pretended, why then we can scarcely exalt too highly this value in every kind of human interest and every line of human endeavor. From this point onward in our contention we shall rely upon this assumption as though it were made once for all.

The value of the men who know, and who are such sort of men that they may be depended upon to use their knowledge honestly if not in a purely benevolent fashion, may be illustrated in a variety of social and civic relations, beginning for purposes of convenience with those which from the point of view of the ideals of knowledge may seem arranged in the reverse order of their importance. Almost all kinds of clubs, sodalities, associations, unions, and whatever more or less high-sounding names are given to men and women who for common purposes have gathered themselves to further their own enlightenment or that of the community, and to secure the betterment of some particular sphere of affairs, are chiefly in need, sore need, of advice and leadership from those who know. Not less true is this, but more touchingly so, of all manner of business corporations, including those whose special function it is to manage matters of high finance, whether in banking institutions or in the treasury

departments of the state and of the nation. Men who know how to build bridges and buildings that will not unexpectedly collapse, to devise and install machinery that will be efficient and economically satisfactory; men who are honorable, beyond the limits of an honesty sufficient to keep out of jail, but also gifted with the imagination and wise in the experience necessary well to plan and conduct great public affairs; men who know the needs and ways and languages of foreign nations, in order to seize and improve the present surpassing, but also, in all probability, quickly passing opportunity to extend and sweeten the nations' foreign intercourse; — how great and sore is America's present need of men who are experts in all these material factors of her national prosperity!

Surely the same need is felt for men who really know, in the conduct of the world's military and naval affairs. For here, if nowhere else in national and international relations, the *dictum* of Napoleon is likely in any time of need to prove itself most true: *À la guerre les hommes ne sont rien; c'est un homme qui est tout.* Let us hope, however, that the need of such experts as the master of the military science of his day declared to be in time of war so decisive, may be averted by a far better supply of those men who know how in times of peace to mediate the affairs of nations, thus forestalling war. And this is not the need of platform speakers and lecturers who, too often

without either knowledge or wisdom, vouch for rosy views or ignorantly or maliciously paint pictures to excite irritation and contempt of nations for one another; it is the need of courteous and refined but frank and kindly gentlemen who are also trained diplomats.

But who shall picture adequately the appalling need of the hour for men who really know in our courts of law, in the legislative halls of the state and of the nation, and in the administrative offices of both? And when we face in another direction and contemplate the dissatisfaction, restlessness, and meagre results, that mark the public estimate of our prevailing and hitherto much boasted systems of conducting educational and ecclesiastical affairs, we seem at the same time to reach the depths of our degradation and the heights of our solicitude, over the lack in places of influence and command, of the men who know.

All these forms of need, which on their reverse side are challenges and encouragements for the individual who proposes to answer for himself the question, What can I know? at least in some particulars in a thorough-going way, admit of endless and to the candid mind convincing, however much debated, illustration. We select two or three for more ample remark.

The labor unions and the corporations of employers and financiers of labor have for some years past been grabbing at the hand of legislation and pulling it in opposite directions to enact

and enforce laws supposed to be favorable to the supposed interests of one of the supposedly opposed parties. Both have been to a large extent led by men who were short-sighted, if not blind, to the economic and moral factors making for or against the positions they were assuming. Both have remained unable to calculate on a basis of history or any sort of principles the more nearly ultimate and the most important results of the policies they were trying to get set into legally binding formulas. The legislative bodies to whom both have made their appeal — often by way of bribery or other indirect and immoral influences — have not, in general, held in their solution a moiety, often scarcely a sprinkling, of the men who really knew any thing worth while about the subjects on which they were solicited or demanded to legislate. This has been strikingly true in the management of our railroads. In the interests of the labor unions we have had laws passed that aimed to abrogate the most fundamental physical facts; as to give a single illustration, the enactment in adjoining states of laws regulating at different sizes the cars which passed through them engaged in interstate traffic! The net result of legislation initiated from this point of view, it is scarcely too much to say, has been to make all discipline — even when the question was one of safety — extremely difficult, if not impossible. On the other hand, the corporations have so managed the laws and the

prevailing customs, having the force of common law, that they have ceased to be primarily public-utility companies and have become primarily opportunities for the enrichment of stock-floating and stock-jobbing bankers and trust-companies. Thus between the labor-unions and the corporations, or we might almost say, between the mob and the millionaire, the people have been squeezed as between the upper and the nether mill-stone, — and all for the sad lack in the right place of the men who really knew. What has been for several decades increasingly true of our railroads has also been not less true of our manufacturing and mining corporations, and the legislatures which they and their workmen have manipulated or controlled. Herein, the ignorance and the criminality — where criminality there has been — have lain most conspicuously at the door of the Government; and chiefly because the Government has not been composed of, or influenced by, the men who knew.

Time would fail one to tell, and a sort of patriotic shame would prevent one from telling, if one knew, the misunderstandings and irritations, even terminating in expensive and unrighteous war, which the nation has endured in the past, and still runs the risk of enduring again in the future, from the lack of trained and expert diplomatists in charge of its international relations.

It would not be easy to exaggerate, were one so disposed, the deep unrest and wide-spreading

dissatisfaction, with which our national system of education, from kindergarten to college, is now regarded by those who are learned in the theory and history of education, and practised in the conduct of educational affairs. The discipline of the young — the vastly most important thing affecting the truly vital interests of the national life in the future — has now been almost entirely turned over from the home to the public school. But in the average public school, if the truth is frankly and honestly expressed, there is almost no discipline at all. Consequence: there is little discipline anywhere for the average American boy or girl at the present hour. Nor is the case so much better in this aspect of it, if we search the records and, as the phrase is, "get under the jacket" of the American college or university. Active, interesting, full of abounding life and good promise, and not infrequently lovable, is the average school-boy and school-girl, and as well — even more perhaps — the average college student of either sex: but not, sadly not, submissive to any kind of discipline, great as is the need of it. It must also be confessed that the men and women who really know are being discouraged in respect of their intention to pursue with enthusiasm the vocational career of the teacher, by the rather onerous and degrading relation in which they are placed toward the administrative side of the American college or university. No wonder, then, that a revolt of

feeling, which may finally take the form of either a quiet or an organized "strike," seems brooding in the mind of the men and women whose "profession" it is to be something of the expert type in some particular kind of knowledge.

In the churches, they who hold somewhat sinister but not altogether unjustified views, are noting the dearth of men and women who really know the religious and moral principles they profess, or the right way to put those principles into the supreme control of the conduct of life. "What a dearth," they cry, "of the men in the pulpits who can expound to meet the modern needs of the alert inquirer, the law and the gospel!" "What a still sadder and more imperative need of the men who, in fervid but intelligent defence of righteousness, can lift up the voice of the prophet!" For scant and hard to discover as the men are who are thoroughly competent for positions in our courts of justice or in our halls of legislation; are not the men even more innumerous who are expert in the proclamation, the application, and the defence, of the truths which concern the unseen but spiritual realities and the actual transactions that take place between the soul of man and the Spirit of God?

But we turn with a real warrant for our turning, from the somewhat too gloomy portrayal of the need of the men who know, to the phenomenon of a growing appreciation of their value and a more diligent and eager search for the real knowers,

if so be that the needy public may find them. True the present tendency is still quite too strong to supply this need by the multiplication of societies, which often result in the putting of mere "figure-heads" into their multitudinous offices, and the relief of the private conscience from the sense of responsibility through the medium of a suitable contribution. Meanwhile the multiplication of highly specialized social aggregates of individuals, not especially intelligent, or zealously interested, for the securing of manifold legislation and other means of reform, goes on in more than arithmetical, in almost geometrical, ratio to the population. Indeed, societies are everywhere becoming more numerous than effective; the numbers of their secretaries and under-secretaries and other officers are in excess of their right proportion to the entire working community; and what has figured under the watchword of the hour, the so-called "social," is being greatly overdone. Since the net result of all these forms of associated action is in many respects scarcely more than to keep society itself from sinking to lower levels of need through ignorance and misdoing, and since in some respects it scarcely amounts to even this, one would be tempted to despair of it altogether were it not for a single most important and hopeful result. The result to which we allude is this. The *social* movement is heavily emphasizing the need and provoking

the search for *individual* men and women who know, and who, by knowledge which good sense and much experience have ripened into wisdom, have made themselves fit leaders and inspirers of others in every good work. Only when the need of such expert advice and assistance is met with a sufficient supply, will society begin quite to get the better of the economical and financial blunders, the follies and crimes of syndicates and labor unions, the errors and corruptions of courts and legislative halls, and the deficiencies in the management of educational and ecclesiastical affairs. In saying this we are far enough from espousing the Platonic contention that all wrong-doing results from ignorance; while emphasizing the patent truth that much ill-doing certainly has ignorance for its primal source and overflowing fountain.

The call to a sphere of activity in which the individual shall undertake some more or less specialized form of work, just because he knows better than others just how to do that special work, was never before so pronounced or so prolonged. If it be to lay brick or make mortar, to raise the wheat or grind the flour or bake the bread — or whatever — the case is essentially the same. And they are few of the nation's children, who have average intelligence and opportunity, that, *if they will*, cannot find some field for work among the men and women "who know."

VALUE OF THE MEN WHO KNOW

There is one chance for the application of our thesis which is of all the most important, but is of all most apt to be overlooked or, if seen at all, quite neglected. This is its application to the sphere of morals and religion. Attention has already been called to the differences in some particulars, but in essentials the likeness, of the beliefs and knowledges in these domains when brought into comparison with those supposed to be under the complete control either of the positive sciences or of so-called common-sense. Art, morals, and religion, we have agreed to say, have their knowledge-judgments, as well as their opinions and their beliefs, determined more by emotions and instinctive impulses, many of which are obscure in origin and uncertain in effect. But we have also seen that the partial difference in origin results chiefly in differences in degree and in the grounds on which — by no means less securely, as a matter of course, so to say — the knowledge-judgment is made to rest.

The practical result of the facts to which reference has just been made is to throw the mind of the average knower into one of two extreme attitudes whenever he honestly endeavors to obtain corrected or increased or better improved knowledge on matters of morals and religion. On such matters he is tempted either to take the attitude of submission to authority without knowing the reason why, or of an equally unreasonable revolt against all authority. He either

wills to accept without understanding, without much seeking to understand, what the recognized experts assure him is true; or else he will have nothing to do with claimants to expert knowledge, and declines to believe and practise anything about which he has not held an investigation and made up a mind of his own.

It is worth while at this point to consider how different is the behavior of multitudes of men in matters of art. To be sure, there are multitudes of men who exercise their right to be indifferent to matters of art, as they cannot very well be indifferent to matters of religion, and cannot at all be indifferent to some matters of morals. But if such pay any particular attention to a work of architecture, to a painting or a poem or a musical composition, before they pronounce it as seeming good to them from the æsthetical point of view, they secretly wish to find out how it seems to those who know, when viewed from the same point of view. If the millionaire contemplates building himself a palace, whether for his business or for his home; or if he wishes to purchase a picture or a curio from Japan or China, or even a carpet for his staircase, he first consults an expert. The expert is consulted, not simply to tell him whether the alleged work of art is really worth what it is reckoned to cost, but also and chiefly — for this is where the millionaire is most likely to feel himself incompetent — whether the thing contemplated is a

real work of art. But what millionaire confers with an expert in ethics before making up his mind as to the morality of a profitable business transaction? And how few of any class now resort to the professional teacher of religion as an authority having a justifiable claim to tell him what of religious dogma he may accept as really true. [I have myself, however, — in Japan but not in this country — been consulted as an expert in ethics, by prominent "promoters" as to the ethics of "promotion"; and I have known a Japanese youth to walk several hundreds of miles to listen to lectures which he hoped might make him see more clearly how he could reasonably believe in God.]

In very truth, there is no other sphere of human belief, knowledge, or endeavor, in which the need and the value of the men who really know are so great as in the allied spheres of morals and religion. And why should it not be so? And who that knows the elements of humanity's moral and religious development can fail to be assured that, in very fact, it has been so? There have been in all the centuries a few men of far more penetrating and profound insight into spiritual realities than has belonged to the average of even the most intellectually cultured of the race. These men, above all their contemporaries and above all but the few of like spirit and like experience in all eras of history, have been recognized as *authorities* in matters of morals and

religion. Nor has the foundation for their claim to authority been any whit less reasonably established than that of the great teachers of the truths of science or the truths of common-sense. They have discerned more clearly than others the eternal principles of binding obligation on all persons and covering all personal relations. They have given evidence of having attained a sort of "face-to-face," or intuitive acquaintance with God and, in a practical way, with the relation which human beings may come to sustain to him. Of the many claimants to highly specialized knowledge, growing out of deeper and more expansive experiences in matters of morals and religion, some have indeed been fictitious and some fraudulent. But some, a really good few, have established their claims so far as the testings of history and of the ripenings of reason can establish such claims. Surely no increase of the numbers of the *illuminati* in other lines, no multiplication of experts in the practical applications of the positive sciences, no improvement in the economic and social conditions of the "masses," can abbreviate or, much less, abolish the need and the value, for the individual and for a society, of those who, above others, know the real truths of morals and religion.

What now should be the attitude of the average man who is asking himself the question, What can I know? toward the experts of the order of which we are at present considering the claims. Neither

of the two extremes referred to above. Slavishly and without inquiry and concernment as to the real truth of what they teach, to submit the humblest judgment to a merely *ipse-dixit* authority of these experts would quite defeat the purpose with which their claims are kept before the attention of mankind. One cannot take over moral and religious truth as one can receive a gift of pickles or candy from another hand. Such truth can be received from another only by a species of self-appropriation; and neither Confucius or Buddha or even Mohammed, and least of all Jesus, aimed at making hypocrites rather than disciples. On the other hand, not to resort to these souls who have had the insight, the reflective energy, and the profound experiences, which fitted them to be the world's great teachers of moral and religious truth, on the ground that one man may know all this as well as another, or even that no man knows anything, with any reasonable assurance in such affairs, is at once and before trial to cut one's self off from the best sources of the most desirable and most important and quickeningly practical truths.

In this supreme sphere of beliefs, knowledges, and practice, every man, even if he cannot reckon himself among the choice few who really know, should at least know enough to choose wisely his counsellors and his leaders. For in these matters, "in a multitude of counsellors, there is (*not*) safety."

In a word, in this critical hour, of the rise in power of the democracy, the most awful danger is the loss of leadership by the men who know. It is the making of the individual in grander and truer proportions to which attention must be directed anew, rather than to the reform of society in the lump. And the greatest need of the hour is a larger number of the class who really belong to the intellectually and morally "best few."

CHAPTER XII

CAN A MAN KNOW GOD?

THE somewhat startling and seemingly objectionable form in which we have stated the question it is now proposed to consider is certainly not the current way of propounding it at the present time. It is still common in scholastic and theological circles to propose an examination into the arguments for the being of God. In these schools the terms in which the arguments are couched — ontological, cosmological, the argument from design, and whatever else — and the method of subjecting them to defence or to critical examination do not essentially differ from what was customary generations ago. If, however, the question is given a more personal and friendly turn, it takes the form, "Do you believe that there is a God?" or — more closely intimate and full of concernment — "Do you believe in God?" Neither would the answer evoked in most cases by the question, even when asked in the intimate and strictly personal manner, be a square affirmative or negative to the proposition as we have chosen to frame it. Whatever form the inquiry might take, the response would probably not get beyond

the assurance implied in some such words as these: "The arguments, when properly stated and interpreted, seem quite convincing to me"; or, "I have never been able to understand the convincing quality or to accept for my own intellectual satisfaction or for the guidance of my conduct, such vague and transcendental and pseudo-realistic so-called 'proofs' as those you have just presented for my judgment to work upon." But if the question were, so to say, as between friends and the reply elicited were understood to be confidential, it might take this form of words: "Yes, I surely believe"; or, "I am sorry to say I have not yet attained the full faith about which you so kindly inquire of me."

It might happen, however, that the answer of some one to whom this most important of questions was put, in whatever of the many ways of its putting, would be prompt, direct and decisive, as viewed from the point of view of the mental perspective of the person who gave it forth. Suppose, then, the reply were, "Yes, I do know God." We should suspect the person answering in this now unaccustomed way to be some sort of a mystic, either of the philosophic or the naiver religious type. If we discovered that our interlocutor meant simply that the argument for an Absolute seems so clear and convincing as to produce a *knowledge* of its reality; or that he has convinced himself of the success of such an intellectual experiment as shall bring the philo-

sophic mind to the immediate intuition of this Absolute; we might consider him as a disciple of the Hegelian dialectic, or of the Schellingian *intellectuelle Anschauung*. We should not necessarily regard him as a particularly pious man; although we might defer in a way to his especially logical habit of mind or to his peculiar skill in cultivating and using the Bergsonian method of philosophizing. If, however, the answer came from the depths of the moral and religious experience of some especially pious soul, and as a matter of alleged daily communion and constant rule of living, while we might not be able to convert this alleged experience of another into our very own, we should be inclined, I think, to treat it with *much* respect from the point of view of feeling, and with *some* consideration, from the point of view of the satisfactions of the intellect. At any rate it would be an interesting and impressive "phenomenon of self-consciousness." If, now, such phenomena were greatly multiplied and persistent in ages of history and in all human races and stages of man's development, we might at length be convinced that there is herein a demand for converting such a subjective conviction into some kind of an objective certainty.

Now the actual fact of history is such as we have just supposed it possibly might be. Most of the men to whom reference was made at the close of the last chapter, the men who *know* as experts do, when the call is for expert knowledge

in matters of morals and religion, have been witnesses for the reality of a Divine Being of the world, who is at the same time the perfect Ethical Spirit and the Father and Inspirer of the souls of his sons among men. These experts have quite generally affirmed this assurance of knowledge on the basis of personal experience. They have, as they claim, found themselves unable to interpret their profoundest thoughts and feelings in any other terms of knowledge. As for them, they know the world of things as a world in all of whose realities and occurrences something spiritual is immanent. They can understand their own life and development in the light of no other principle of interpretation than that of the constant indwelling of the Divine within the conscious or the latent spirit of man. Judged by the social and ethico-political results which some of these experts have effected, we are obliged to confess that the practical outcome which may be appealed to for the testing of their belief stands up bravely before their heavy task. The men who have known God have been the men who have had a holy love and a holy fear in view of their claim to knowledge. And the men who have feared God have been, for the better part of them, the men who have feared no one beside. They have been the predecessors and as well the successors of the prophet Elisha, who could defy Ahab with the words: "As the Lord God liveth before whom I stand."

Now it is perfectly easy for one who finds in his own experience nothing to serve as a basis for such a claim to knowledge, and who is satisfied with the purely mechanical explanation of the world of things and of men (an explanation which seems so ineffably shallow to some of us) to label this alleged knowledge with the word "superstition" and dismiss it with a sigh or with a sneer. We say, it is perfectly easy; and many there be who choose this easy way. But we are tempted to ask whether after all, this method of dealing with such a notable and significant class of human experiences is not, the rather, a bit unfair and shiftless. Our somewhat invidious inquiry seems the less inappropriate when it is explained in the light of several important truths that have been disclosed in the attempt to answer the many secondary questions which fall under the main question, — that for the individual knower, What can *I* know? For, first of all, we have many times seen, and from a variety of points of view, that this question is in the last analysis a pretty closely fitting personal question. A man who is born color-blind, or has brought upon himself certain diseases of the eye, is forced to admit, "I can never know what it is to distinguish and enjoy the full harmony of colors which is knowable by normal vision." The unfortunate who is by nature or by accident made stone-deaf can not know, as the rest of us can, a sonata of Beethoven when he hears it. He can perhaps

hear noises; he cannot hear the sonata. Did not Darwin confess that he had lost the power to know a poem when he heard or read one? And are there not thousands of details of science and art which some knowers most surely know, but which other knowers have either never had, or have quite completely lost, the faculty of knowing? And is not what is true, in the details of science and art, true as well of the principles of both; since if properly reached, they are derived from these same details? And why should the case be essentially different when it is concerned with the experienced facts, and the inferences made from those facts, that are customarily classified as belonging to the moral and religious nature of man? On the contrary, we find as the result of prolonged research from both the historical and the psychological points of view, that no other facts of human experience are so universal, and no other inferences from facts — whether reduced to the semblance of a scientific system, or not, are so thoroughly pervasive and so profoundly influential, as are the facts and the principles of morals and religion.

But there are other aspects of the answer to the general question, What can I know? Some of these have an important bearing on the inquiry whether a knowledge of God may hopefully be sought and possibly be attained by any human soul. Among such aspects we may profitably glance backwards at the chief ones. All knowl-

edge, except that really worthless but indubitable affirmation of self-consciousness, "Such and no other is my here-and-now conscious state," admits of degrees in both its clearness and its accuracy. In the individual and in the race, experience is, essentially considered, a never-ceasing development. But if we require that all its facts, beliefs, assumptions, inferences, and alleged laws and principles — whether physical, social, moral, or philosophical — shall be established beyond all question or possibility of doubt from any source, we simply relegate to an invincible and suicidal agnosticism the entire body of human knowledge. It may then well be that, if the racial experience on matters of morality and religion is turned out of reason's court as a lying or incompetent witness, she will drag away at her skirts all the truths of common-sense, of science, and of philosophy. Under the same weight of doubt, the principles of ethics and religion will not go down alone. All truth will plunge with them into the pit prepared for their sole destruction and lone burial. For history shows that when morality and religion are badly treated, they have very distinct and terrible ways of avenging such treatment. If, then, the agnostic and the ecclesiastic demand odds on the opposite sides for the positions they have taken, it belongs to the man of fair mind to see that the interests concerned — so tremendous and practically important are they — should have fair play.

Another consideration won from our previous thoughts is in place here. Different knowledges are in general gained in different ways, dependent upon the character of the thing to be known and upon the qualifications of the knower. The child may know how to add and to substract, to multiply and to divide, even in sums of large degree. But of the meaning, and the further reaches, and the limits for human uses, of these processes, — of all these problems, he will probably not even have dreamed the existence. And as to the solution of some of them, — that is still, and very likely forever will be, beyond the ken of the expert in the higher mathematics. But when the child or the expert is acquiring this kind of knowledge, he gets some of it by means of concrete and sensuous intuition; other of it, by a more inward and spiritual intuition dependent upon imagination; other of it by an inexplicable sort of leap to judgment; and still other, by the sturdy thinking-of-one's-way-through. Even for adult and trained minds, by no means all kinds of knowledge are susceptible of the unlimited use of the methods of mathematics and of the positive sciences; indeed, some kinds of knowledge scarcely admit of the use of such methods at all. Especially apparent is the deficiency, the utter failure, of any such methods, in ascertaining the deeper truths concerning personal relations. We cannot figure out, or by laboratory methods determine, the problem whether there exist for us, friends, or

what are the essential characteristics of the friends we fancy ourselves to have. The real existence of ties of sympathy and affection is not discoverable by microscope or spectroscope; the strength and worth of such ties is not expressible in arithmetical or algebraic formulas. These are matters to be determined along the lines of another kind of experience.

One other important consideration — especially important in matters of morals and religion — has repeatedly been brought into our field of view. This relates to the dependence of every form of knowledge, and every advancing degree of knowledge, on the knower's will. "He that *wills* to know of the doctrine" shall know, is what the founder of Christianity declared. In saying this we are far from proclaiming the thesis that "the will to believe" should be held to justify the character of the belief, in any way disrespectful — not to say, disregardful — of the evidence on which the belief proposes to establish itself. All kinds of belief, as well as all manner of claims to knowledge, are under obligation to do their very best to place themselves on grounds acceptable to reason. On the other hand, no knowledge and no belief is possible without the engagement of the knower's will. Attention, interest, accuracy of observation, persistency in the investigation of reasons, fairness in estimating their weight and their intrinsic worth, and stubborn clinging to the trail in the hunt for truth, are all mental

attitudes and performances which involve that active and measurably self-controlled aspect of the knower which we call "his will."

This lengthy dwelling on truths already established or hinted at with regard to the entire problem of knowledge will quite justify itself if we keep it constantly in mind as we advance to the particular problem which ought, on account of its very nature, to engross every individual: Can I know God?

If one approaches in the attitude of the open mind the problem whether there be any reality corresponding to the conception which the highest development of the race has embodied in the Divine Being of the world (for the present we will content ourselves with this somewhat vague and elusive term), the question of the method of approach at once looms large in its proportions. If at all, *how* may a man hope to arrive at the knowledge of God? And by "knowledge of God" we must mean what we are understood to mean in all cases of the attempts at knowing — that He is, and something of what He is.

It is easily made evident that such knowledge as we are searching out the method of, cannot come by the way of sense-perception of its object alone. No man can know God, that He is and something about what He is, by immediate thrust, as it were, of the object into the mind through some avenue of sense. Eye and ear and touch, without spiritual vision and the mind open to

other voices than those borne on wave-lengths of vibrating air and, as the phrase is, to spiritual contact, cannot convey the object of religious faith and worship to its rightful shrine within the soul of man. Theophanies may be admitted by the pious, and these of many kinds — angelic messengers, including the very "angel of Jehovah" *par excellence*, apparitions of the Divine in dreams or waking visions, and in varied bodily shapes; — but without the interpretation of the kindred mind, these do not avail for knowledge. Such "appearances" may indeed arouse the suspicion or confirm the already existing faith in the "reality"; but they alone, cannot serve to place it on rational grounds.

This admission has, however, no terrors whatever for minds piously inclined. Nothing personal is known through the senses alone. Indeed, have we not established the truth that no *Thing* even is known at all except as its appearances to the senses are interpreted in quasi-personal terms by the intellect? As devoid of personal implications and meanings no thing is known or can be known. But as to those whom we somehow know as persons quite essentially like ourselves; How are they known to one another, that they are and, in a measure, what they are? Only in the way of soulful interpretation of physical signs. Recur again to the fundamental nature of the experience on the basis of which all our social structure, all our sure knowledge and suc-

cessful guesses appertaining to personal beings and personal relations, are so surely based. It is all by way of physical signs interpreted in terms of our own self-conscious personal life. As an affair of the senses alone, you are, and forever you must be, nothing but a system and a series of physical signs to me; and I am nothing more or less to you. The most intimate form of all sensuous knowledge, that which the Hebrew language made the very acme and symbol of the highest conceivable form of all knowing, is after all nothing more of a guaranty of the reality of its object — as to the that and as to the what of its real being — than amounts to the very same thing. And yet — it may fitly be repeated — we make *such* knowledge, and no better, the one reliable thing as guaranteeing all human society with its manifold relations. Indeed, it was in the name of this guaranty that we saw M. Flournoy calling an imperative halt to philosophical scepticism.

Humanity in all ages and stages of its great uplift — if uplift it has actually gone through — has somehow interpreted the world's physical happenings as sure signs of an indwelling or overpresiding personal life. And the one great triumph of man's religious philosophy, perhaps the greatest triumph of humanity's reflective thinking, is the monotheistic conception of God and, in dependence on it, of the world as a manifestation of controlling and immanent spiritual Life. Whatever, then, one's attitude may be toward

the claim of any individual to an unquestioned knowledge of the Divine Being of the World, one cannot oppose this claim with haughty and self-confident negation or with a spirit and manner bred of slothful indifference.

It must also be admitted that the knowledge of God comes to no man by way of strict demonstration, after the method of the mathematical sciences. There have, indeed, been various attempts made by theologians and philosophers to construct such a universally compulsory form of argument. All these attempts, when tested, have failed both of logical soundness and of practical utility. In spite of their failure, their persistence in ecclesiastical dogma and philosophical speculation of a certain order is a fact significant in suggestion of a great underlying truth. The human intellect clings to this ideal of some rational Ground to which all the infinite variety of beings and occurrences shall point as in proof; and from which, as a rational source, they may all be conceived to flow forth. To such a conception an almost infinite variety of names has been given; and new and more impressive titles are still being continually sought for IT. Lest its purity may somehow be impaired by too great an admixture of obviously anthropomorphic and anthropopathic elements, the most abstract terms — "The All," "The Infinite," "The Absolute," and even "The Unknown," are some of them — have been bestowed upon the conclusion of this demonstrative

argument. It is no unkindly or unmeaning sarcasm to say that the knowledge of God, and the practical service of Him, are honored and promoted by the persistence and, at the same time, the logical incompetence of such methods of its attaining.

Any disappointment at the failure to apply successfully the *quasi-mathematical* method to this important quest for knowledge may, however, be speedily assuaged. For we do not know anything about reality, that it is or what it is, by the processes of pure mathematics or by any process closely resembling the purely demonstrative method. We know what is and what happens by observation; and where we cannot observe, we know by inference from accumulated observations. In making these inferences we use, with a success corresponding to the nature of the subject, the method of mathematics. But we are never quite properly sure of the results of this method until we have verified or corrected it by renewed observations and, if possible, by the controlled method of observation, called the experimental and definitely scientific.

To turn now to the positive method, by the success or the failure of which all claims to arrive at a knowledge of God must be tested, we may observe that it presents no essential difference to that by which all manner of human knowledge is reached. This is by inferences that interpret and explain experience in the most reasonable

and practically useful way. The stores of experiences which demand interpretation in order that reason may be satisfied and the life lived in the best way, may be regarded as those of the race or those of the individual man. Of course, here, as in all kinds and degrees of knowledge, what avails the individual is only so much as he somehow manages to make his very own of that which is common to the race or is peculiar to himself. Thoughts and beliefs and conceptions, and attitudes of mind and heart and will, must all alike compose and determine the resultants of this process of observation and inference. Whether this kind of knowledge will come, and whether in meagreness or in its greatest possible fulness and brightness, to any individual man will depend, as do every kind and degree of knowledge, on what the manner of the man is. The scoffing remark that every man makes his own God is of course true; just as it is true that every man makes, in a way, for himself every object of belief, affection, and knowledge. It is well that it is true. And such a creative act is man's heaviest responsibility. But it is no more true that the individual makes his God to his own liking and in a quite complete independence of the reality, than it is true that he constructs any mental picture or more elaborate conception of the real and the actual in such a quite independent fashion.

If now we inquire what experiences of the individual and of the race favor, if they do not

imperatively demand, for their interpretation in the rational and practically useful way, the inference that God is and certain inferences as to what He is, we, for our part, claim the entire sphere. From centre to circumference in every direction of man's experience with nature and with himself, and with the historical development of both, the claim is true. For we have no interest in an abstract Absolute, or a pale semblance, of a quasi-mathematical Infinite, or an absentee Divinity and aboriginal Creator; our interest, both theoretical and practical, and the interest of the race, is in a Living God. But in order to prepare himself either to accept or to reject our contention as to the breadth and the scope of these so-called arguments, every individual must observe and inquire and read and reflect, if he would act intelligently or safely. And why should it not be so? Is it not eminently so, when the question is about the acquirement of any similar kind of knowledge?

We are not going to attempt the presentation and critical review of even the most important arguments for the being of God. We shall simply point out the sources to which some of them may be traced.

But first of all, let every inquirer assure himself of the vast practical importance of one's attitude of mind and heart toward the World in which one exists, and whose child one is. Shall one look upon the World as a hopelessly

heterogeneous and inexplicable chaos, quite lacking in any rational principle of order or any semblance of a moral purpose or concern for the welfare of the human race? Or, shall one regard it as on the whole a wonderful and orderly mechanism, the working of which science is mastering more and more completely and turning to the benefit of mankind; but after all, *mere* mechanism, unacquainted with and joyless in its own order, and unconcerned over the character of the discipline which it administers to humanity, and quite planless so far as the evolution which the human species is wresting from it is concerned? Or, shall the would-be knower, the rather, if he so can on a basis of experience and of inferences from experience, be fain to regard the complex of things and events as having some genuinely rational and quasi-moral significance? Shall he incline, the rather, if in so inclining he does not lean too heavily in the direction which contradicts the balance established by the majority of the facts, to the belief in some kind of sympathy with correct thinking and right living in the "heart of the Universe itself," so to say? May he not interpret nature and human history so as to find in them "A Power that makes for righteousness," though often, perhaps usually, in a hidden and mysterious way?

All the world's ways are hidden, until we find them out; and they are all the more fundamentally mysterious, the more we find out about their

superficial appearances. However we interpret our experience, the same thing remains essentially true. But No! not quite; not by any means, quite. For now the question follows: What attitude of heart and will shall a man most reasonably and safely take toward the Universe in which he lives and whose child he is? Shall the attitude be one of enforced or willing resignation; as though, after all, the world were "a pretty good sort"; or far better still, as though the world's ongoing and destiny were in wise and just and kindly hands? Shall the attitude be one of indifference (if that be possible), or of defiance, or despair? Or shall the investigation of the evidence, and the sober and prolonged reflection upon the intellectual and moral worth of its different possible interpretations, eventuate in the faith in the goodness of the Divine Being of the world, as though he were the Father and Redeemer of mankind, and in the sequent life of service as a son of such a God?

When the man who wishes to test for himself the possibility of an affirmative answer to the question, Can I know God? has at least a momentary due appreciation of the necessity and the value for the individual of a right adjustment of his attitude toward the World, he may profitably try to think himself through to a conclusion along some such lines of reflection as these. How did this lofty monotheistic conception of immanent power, and controlling reason, and

indwelling and everywhere working Holy and Redemptive Spirit, come to be in the intellectual and moral evolution of the race? Strange indeed, if such a conception, and such proofs as follow from its holding by so many and such men, could arise as the product of chance in original Chaos, or as the working of a Mechanism unable to present to itself so noble, even if fallacious, an ideal! For there is not a word of historical truth in the assertion sometimes so flatly and foolishly made, that there are comparable superstitions which modern science has driven or shows signs of driving from the field. *Götterdämmerung* is the dawning of the belief in the one only and living God. And the science which drives out superstition only clears the path for rational belief.

Let then the inquirer into the grounds on which this kind of knowledge is held by its advocates to repose, turn from the conception of a Divine Being of the World, as a social and mental evolution, to the progress which the natural sciences have made in the description and exposition of Nature in the large. Surely this progress has been, in the main, along the line to the conclusion which I have elsewhere expressed in the following words ("A Theory of Reality," p. 460): "To get from Nature to Spirit, we have only to get *more deeply into* Nature. For whenever mythology or science or philosophy makes due recognition of the extent and potency of the Absolute

Whole, as an explaining principle for what is otherwise particular and isolated, it only expresses the universal insight of man's mind into the real character of the world of things and of spirits. *Except in so far as it is known by having additional characteristics of Spirit, Nature is as 'brute and inanimate' as was the old-fashioned but now extinct conception of 'dead matter.'"* Atoms are no longer indivisible and internally inactive elements of things. Ions and radio-active beings have been discovered to which may be assigned the most hidden and mysterious operations of Dame Nature. But the good Dame has not lost her mind thereby or parted with any of her spiritual modes of behavior. We have still to say of these substances called ions what Clerk Maxwell said years ago of the atoms: "They are a very tough lot, and can stand a great deal of knocking about, and it is strange to find a number of them combining to form a man of feeling." We have still as much reason as he had to add: "I have looked into most philosophical systems, and I have seen that none will work without a God." It has already been shown that the scientific knowledge of varying forms and degrees of energy combining, under so-called laws, to produce such a result as science knows the Universe to be, when interpreted in terms of concrete living experience, can only be understood to be; *One Will energizing in conformity to ideal forms and aims.*

Nor need the inquirer be satisfied with this

somewhat vague and semi-pantheistic conception before which the Chinese word TAO is brought to rest. "There was something undefined and incomplete, coming into existence before Heaven and Earth. How still it was and formless, standing alone and undergoing no change, reaching everywhere and in no danger of being exhausted. It may be regarded as the Mother of all things. I do not know its name and I give it the designation of TAO (The Way). Making another effort to give it a name, I call it The Great."

Turning again now to the testimony from the evolution of the social and religious consciousness of the race, we see how all the choicest fruits of this consciousness have been grown on the "Tree of the Knowledge of Good and Evil" and the "Tree of the Knowledge of Life" (of Moral Personality and of Personal Life). *Personal* values, *personal* development, *personal* nobility, have been intimately dependent in history — as they are in theory — upon the personal interpretation of the Universe and of the history of man.

It is, however, when we ask to have this valid conception of God as immanent and controlling personal Life converted into the reasoned faith of God as perfect Ethical Spirit, that the soul is apt to become most distraught and the intellect most confused. Is this Universe moral to the core? and is it friendly toward man? This is a question which wrung from Martin Luther the audacious exclamation: "My God! art Thou

dead?" and from a far greater than he the bitter cry: "Eli! Eli! lama sabachthani?" As a question placed on grounds of argument alone, in its final solution it probably must always remain with the individual largely a matter of choice, — not, however, of arbitrary and capricious choice. But of choice, solicited rather than compelled by a weight of satisfactions for the moral reason and for the safeguarding of the moral and religious life. In view of the many evils which the Universe is plainly tolerating, and some of which it is seemingly fostering and almost rewarding, when it pains and disappoints the individual, he may seem justified in adopting the blasphemous words of Omar Khayyam?

> "For all the sin wherewith the Face of Man
> Is blacken'd — Man's forgiveness give — and take."

If the question presses, shall one choose one's side with the complainants or with Epictetus, when the Stoic philosopher states and answers their charges in the following words: "Zeus does not order these things rightly. Why so? Because he has made you to be patient? Because he has made you to be brave? Because he has made them to be no evils?" And how shall the worker under the worst of modern industrial conditions, or the man who esteems himself made an outlaw and a tramp by these conditions, say rather with Marcus Aurelius: "From Thee all things come; In Thee all things subsist; To Thee all things

return. And so I say of the World: Dear City of God" (?).

As a matter of fact, however, — a most astonishing fact — millions of the lowliest, most pained and most neglected of the race, have during centuries been uttering similar sentiments of resignation, and even of joyful acceptance of their lot, in the words of Confucius and Buddha, but especially of Jesus and his disciples. If the attitude of the majority of the present day toward this aspect of the world's personal Life is quite different, it does not necessarily weaken the argument for a good God; it may only prove the absence, on other grounds, of the right attitude itself.

And now we reach the profoundest and most persuasive reasons, — those, which are bound, by their very nature, to prove most influential over the answer which every individual will have to give to the inquiry: Can I know God? For every individual, the answer will depend chiefly on whether he finds the grounds of such knowledge in his own experience. And whether, or not, he finds such grounds will depend chiefly on his attitude toward the question. A certain assent to the proposition that there is some sort of a God may be accepted as a mere form of words; just as men accept the statement that there is a star named Sirius or a city in India called Amednaggar. A sort of belief in God may be held that does not differ greatly from the belief that Na-

poleon lived, and was a great general; or that Justinian was the creator of the code called by his name. A certain very valuable conception of God as Heavenly Father, that He is and what He is, may be instilled into the mind in childhood and have recurrent periods of influence, more or less great, during the after life. But the supremely worthy and supremely influential knowledge of God is gained in none of these ways. It must derive its right to satisfy the demands of reason by reflection on the experience of the race, as made his very own by the individual; but it must get its final grip upon the soul for the production of invincible conviction and for the conduct in safety of the practical life, through the special spiritual experiences of the individual himself. Here again, there is no essential difference, no marked exception, appertaining to this particular kind of knowledge. For this is in the main the same method by which all similar knowledge is obtained. We know the person, at first, only by a series of physical signs, or by being told about him by some one who knows better than we. But when we have had years of the closest communion of the sort which, even between finite persons we do not hesitate to call intimately spiritual, then we know the other, that he is and what he is, in a manner which for us, admits of no shadow of doubt. For it is merely a matter of experienced fact, that the answer to the quest for this kind of knowledge is peculiarly clear and

potent as it is unfolded in the consciousness of those who have taken the attitude of the so-called "sons of God."

There is nothing insane or even invidious in any one's asking of himself the questions: "Do I know God?" and "If not, why not?" No one, indeed, can sanely lay claim, or wisely aspire, to a perfect knowledge of the Divine Being of the world, any more than to a perfect knowledge of the World regarded as an infinite complex of phenomena demanding scientific description and explanation. But, as a modern Hindū writer has said: "Men, for the practical purposes of their existence, need to *get* God, and not merely to *have a knowledge* of him." "Not *merely* to have a knowledge of him"; but, nevertheless, to experience a "getting," which both springs from and issues forth in a knowing. For so much, as a *minimum* of knowledge on which to found the safe and worthy conduct of life, the demands upon reflection, the strain upon the reasoning powers, are not beyond the resources of the average human mind. For adequate comprehension, no finite mind is either sufficient or obligated. But this is even more true of the world interpreted as a physical mechanism, or as having for its substrata an all-enfolding, all-penetrating, ever-mobile, and mysteriously creative Ether. And as a faith, to support and guide the practical life, this "getting" of God by individual experience, so to say, is incomparably superior to any

belief which the positive sciences can possibly establish as to the nature, laws, and ideals, of so-called "Matter," or of so-called "Ether," or of the Universe as a sort of joint product of these two, with electricity as a go-between.

It would seem, then, that it is not impossible — abstractly considered — to place, not only the belief in God, but also a mental attitude which may not improperly be called "a knowledge of God," on a firm basis of fact, — after the analogy of our soundest judgments as demanded by an experience which can receive no other rational interpretation and explanation in terms of reality. But since this particular form of belief or knowledge is of a peculiarly intimate and personal kind, the real reasons for its possession or its absence are apt to lie chiefly in the personality of the knower himself. On the one hand, then, its possession may be just cause for pious gratitude; on the other, its absence may be equally just cause for searching of mind and heart. Thus the negative answer to the inquiry, "Have I this knowledge?" may involve the conclusion: "It is perhaps my own fault." For this knowledge, like all knowledge but even more particularly, is a matter of seeking and of will.

It is quite likely that neither of the interlocutors in the joint discussion of the question, What can I know? is altogether satisfied with the result which has been reached. Before parting, there-

fore, we may fitly imagine the following brief interchange of impressions to take place.

Reader: I took up this book with the expectation of getting a definite and final answer to a question which I had already recognized as of much practical importance, but which I had no time and little inclination to examine in detail for myself, even if I had felt sure of my competency. I trusted the title for the expectation that I should be told just how in each instance to tell knowledge from ignorance and half-knowledge, truth from error, and sound learning from pretence. I expected, henceforth, to be able, almost if not quite infallibly, to guard myself from mistakes, in case I remained an honest inquirer, and to secure a larger growth of knowledge, in case I became more diligent. But now, to know what knowledge is, and how to certify it, and how to win it in the baffling game of life, seems more complicated and difficult than it did before.

Author: Your complaint is perfectly justifiable when seen from one point of view, but quite as completely mistaken when considered from another point of view. For whatever the author's faults of information or literary capacity may be, all the difficulties, and many more than those which have been discussed in detail, are inherent in the very nature of the subject. Nothing is more complex and mysterious than human knowledge, — the conditions of its origin and of its

development, its fundamentals, its limitations, its relations to what we call Reality, and its constantly shifting but ever clinging dependence on the personality of the knower. To discuss the question, What can I know? while recognizing these difficulties and pointing out how, when recognized (but seldom or never without recognition), they may be bravely faced, wisely met, and partially overcome, — such is the very practical purpose which the book has constantly kept before the mind.

Reader: But I have great difficulty in classifying your results and so in making up my mind as to what school in "epistemology" (*sic*) you represent; and so, whether it is the school I have already adopted, or to which I might decide that it would be most respectable or most popular for me to belong. You emphasize the dependence of knowledge on "the will to believe"; you exalt the practical and moral aspects and values and obligations of knowledge; but you do not seem to be a Pragmatist. You recognize the province and worth of feeling and intuition in knowledge; but you do not appear to be an adherent of the Bergsonian type of philosophy. You place human reason in the judgment-seat of authority and thus adopt the position of the rationalist; and yet you warn us that no man can think his way through all subjects, and that, indeed, he is chiefly dependent for his surest knowledge of most subjects on the observations and thoughts of others.

In matters of moral and religious concernment, you locate the grounds of assurance in the experience of the individual; but on the other hand, you advise in the most unequivocal terms docility of attitude in respect to the profoundest truths of religion toward those whom the experience of the race has selected as the "men who know." Thus, while pleading for free thought, you stiffen the principle of authority. You seem to be a somewhat pronounced Idealist; and yet you advocate the alleged truths of Realism as well. And while you insist that all knowledge reaches out for absolute truth and takes a certain grip on infinity, you only ill conceal your distrust of the philosophy of "*The Absolute*" or "*The Infinite*" so-called.

Author: I accept your criticism most gratefully, but rather as compliment than as complaint. For we have been trying to get at truth of fact and truth of fairly valid inference from fact; and this is the kind of truth which it is given us to know, and in the light of which — if we *will* to walk in the light at all — we must walk through the shadier and more gloomy as well as the sunnier and more cheerful paths of life. Knowledge does not come by indisputable logic; truth is not revealed to those who will not seek, and pay its price; the path of right living is not all in the "lime-light." And so I will close our quest for an answer to the question, What can I know? with a quotation from Plato, who makes

Socrates answer Theaetetus in the following words:

"But if, Theaetetus, you have or wish to have any more embryo thoughts, they will be all the better for the present investigation; and if you have none, you will be soberer and humbler and gentler to other men, not fancying that you know what you do not know. These are the limits of my art; I can no further go; nor do I know aught of the things which great and famous men know or have known in this or former ages. The office of a midwife, I, like my mother, have received from God; she delivered women, and I deliver men; but they must be young and noble and fair."

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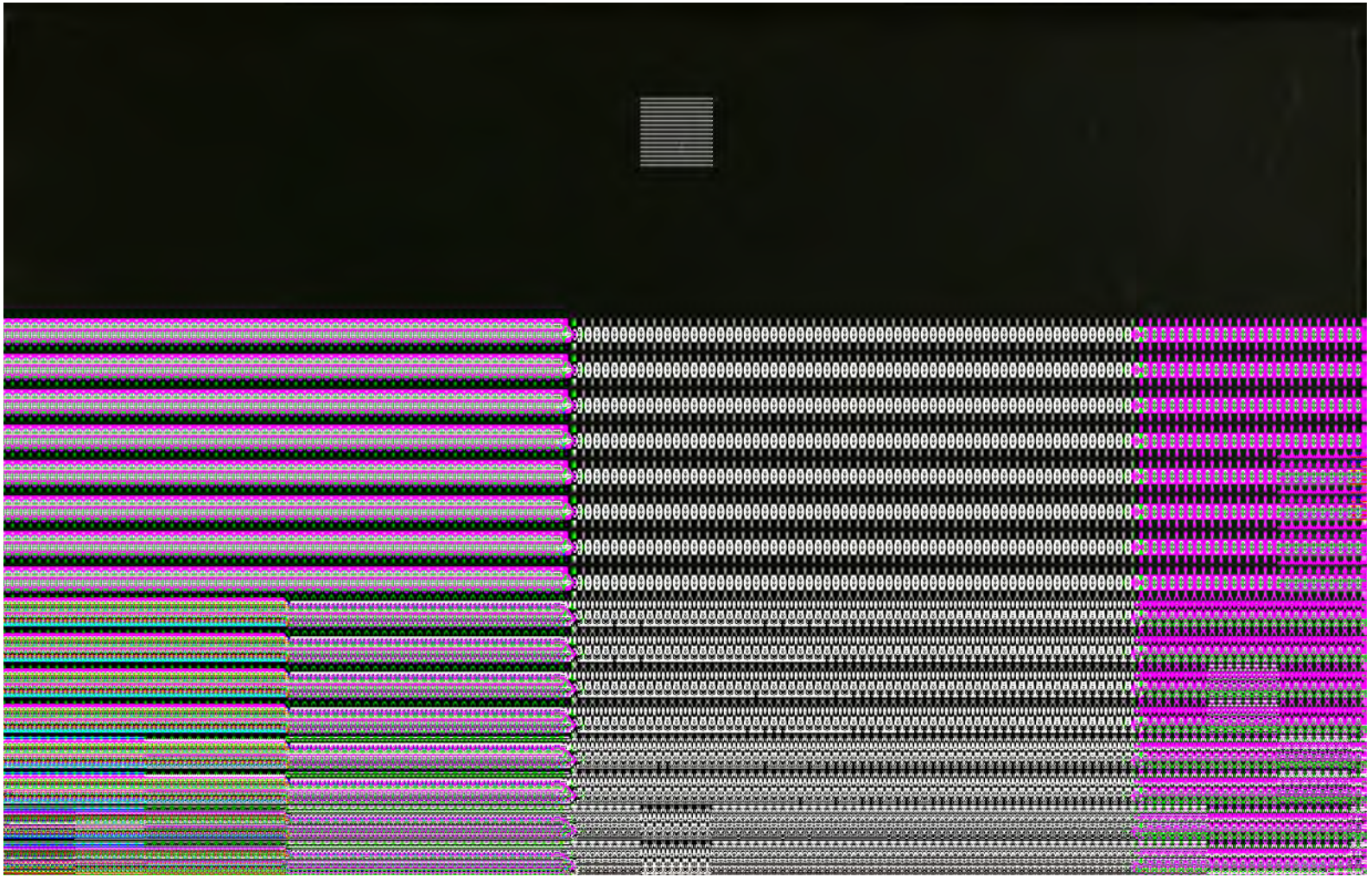
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